REPORT

ON THE HEALTH OF THE

CITY OF LIVERPOOL

FOR

1967

BY THE

MEDICAL OFFICER OF HEALTH

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BY

ANDREW B. SEMPLE, C.B.E., V.R.D., M.D., D.P.H.,

Medical Officer of Health

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PREFACE

I have the honour to submit my 16th Annual Report as Medical Officer of Health of the City of Liverpool, and the 120th report in the series. As usual, this report describes the work of the various sections of the Health Department and includes, in more detail, some recent developments in our activities.

It is interesting to note that the birth rate has continued to fall quite dramatically in the last few years. In 1964 it was 21·4 whereas by 1967 it had fallen to 17·8, a reduction from a figure of 19·0 in the previous year. This trend, which has been noted in the whole of the country, has meant considerable easing of the pressure on the midwifery service as in 1967 there were 12,583 births compared with 13,557 in the previous year.

Another marked change has been a further increase in the illegitimate birth rate. In 1967 this was 10·3 per cent and represents the highest figure recorded since 1945. During the past ten years it has risen from a figure of 5·1 to its present level and represents an increasing problem to the child health and social services. There has been little alteration in the infant mortality rate for 1967 at 22·0 which is a slight improvement on the previous year. The number of deaths from cancer of the lung has dropped from 528 to 503 during the year.

In past annual reports, mention has been made of the effect of the falling birth rate on the domiciliary midwifery service. The speed of change is best demonstrated by looking at the domiciliary birth figures for the last six years :

1962	—	4,768
1963	—	4,096
1964	—	3,648
1965	—	2,726
1966	—	2,031
1967	—	1,462

Although the number of domiciliary births fell considerably during 1967, the number of patients nursed at home after hospital confinement rose a little to 6,353. Once again, there was a slight rise to 7,004 in the number of patients discharged before the sixth day after delivery and this represents the changing pattern of the maternity services.

The Part II Pupil Midwives Training Scheme continued satisfactorily during the year with students from Sefton General Hospital, Liverpool Maternity Hospital, Mill Road Hospital and Broadgreen Hospital, working under the supervision of district teaching midwives. During the year, 110 such students qualified as midwives and 37 midwives were working as approved district teachers.

The emergency obstetric flying squad was called out twenty times to domiciliary patients. Eleven of these calls were for retained placenta, five for post-partum haemorrhage, one ante-partum haemorrhage and three for other causes. This means that the unit is called out in one out of every 73 domiciliary confinements.

The work of the health visitors has continued satisfactorily during the year and it is interesting to note that there has been an increase of over 100 in the defects discovered in children followed up either at clinics or at home. The Phenistix test for phenylketonuria has resulted in two positive cases being discovered in babies under the age of one month.

During the year, 80,823 people were visited by the health visitors of whom 66,707 were pre-school children and the remainder, 14,116 were special cases, mainly the elderly and families with special problems. In addition, 10,000 further visits were made to the elderly, especially those requiring the issue of nursing aids and equipment.

Problem families have continued to be the concern of the health visiting service increasingly and the report gives details of the special work done for this class of persons.

Cervical cytology screening has continued, but it is disappointing that not more than 3,037 women in the City took advantage of this service, particularly as facilities are now available for carrying out investigations in a considerably larger number of women.

Liaison continues at a high level between health visitors and both specialist hospital departments and general practitioners. Special work has continued to be carried out in the field of diabetes, neurological conditions and also geriatrics.

The chiropody service gave a total of 39,198 treatments during the year mainly, of course, to the elderly, although the handicapped are increasingly helped by this service. During the year, three new chiropody rooms came into use at Livingston Drive, Speke and Long Lane clinics. By the end of the year, two full-time and 27 part-time chiropodists were engaged in this service.

The district nursing service continued to expand during the year and for the first time the number of visits paid exceeded 400,000, there being 402,401 visits in 1967. There has also been an increase in the number of heavy nursing cases undertaken by the district nursing service, but a decline in the number of treatments requiring intra-muscular or hypodermic injections. During the year, it was announced that the Queen's Institute of District Nursing would no longer act as the examining body after May, 1967 and that the Ministry of Health will, in future, set the examination for district nurses and each training school will conduct it own examination. At the end of the year approval of the Liverpool

Health Department as a district nursing training school was sought and has now been given. Training programmes continued during the year, and these, so important to recruitment, are essential for the district nursing service.

There was no substantial alteration in the day nursery provision made by the Department during the year although there has been a continued increase in the number of private day nurseries, child minders and play groups registered. During 1967, 22 day nurseries and nine daily minders were registered making a total by the end of the year of 56 nurseries and eighteen daily minders. Many of the private day nurseries are groups of children who meet for half a day, two or three times a week in church halls or other suitable premises, thus giving the opportunity to play with other children in unrestricted surroundings.

The number of home helps employed has fluctuated between 630 and 660. An innovation in 1967 was the appointment of a team of three women engaged to work in dirty surroundings to put such homes in order prior to an ordinary home help taking over. The introduction has proved most valuable in these difficult cases.

There is very little change to report regarding the epidemiology of infectious diseases in the City during 1967. Tuberculosis rates remained almost identical and this raises the question of whether the improvement, after the special efforts made in the early 1960s, has come to an end. It may well prove that it is going to be very difficult to eradicate the last nucleus of this disease. During the year, 234 new cases of pulmonary tuberculosis occurred.

1967 saw, for the third year, a year completely free from poliomyelitis cases; an ample reward for the great efforts the department and City made eight years ago in the widespread immunisation campaign. It would seem that this disease has now joined diphtheria as being virtually non-existent.

There was a reduction of approximately ten per cent in the diphtheria and whooping cough immunisation figures during the year, but this was primarily explained by the marked reduction in the number of births recorded.

There is still a large demand for the removal, under emergency conditions, of elderly persons, under the provisions of the National Assistance Acts, 1948 and 1951. During the year, the Department was asked to assess a total number of 40 cases for such removal. Persuasion was successful in 32 of them and in only eight was it necessary to remove the patient compulsorily.

Further increase was seen in the number of male cases of gonorrhoea, there being 1,303 cases traced compared with 1,278 in the

previous year. There was also a significant increase in the number of new cases of syphilis in both sexes, there being 108 men and 51 women in 1967 compared with 74 and 24 in 1966. The combined figure of new cases of syphilis at 159 was the highest figure during the 1960s and represents a considerable increase over any other recorded year in the last eight years. Every effort is made to follow up these cases and to trace contacts, and it may well be that the increase of cases is to some extent due, not so much to an increased incidence, but to better contact tracing.

During 1967, there were no large-scale developments in the mental health field, and the year was one of steady consolidation and planning for the future. The new hostels at New Hall are now complete, but occupation of the six latest hostels had to be delayed due to inadequate electrical supplies. The workshop functioned extremely well and was full at the end of the year with just over 300 mentally sub-normal persons attending. The mental health centres have continued to look after mentally-ill people in a satisfactory way. The text of the report contains a most interesting analysis of the compulsory admissions arranged, and it is most satisfactory to report that the total compulsory admissions in 1967 under Sections 25, 26 and 29 of the Mental Health Act, 1959 numbered 586 compared with 889 in the previous year. This is by far the most significant reduction in the number of compulsory admissions and shows very clearly that the intention of the Mental Health Act to encourage informal and voluntary admission is being practised in Liverpool.

In the field of occupational therapy and rehabilitation, 1967 has seen a considerable increase in the work undertaken in the units. In addition to each patient being seen regularly at clinical sessions held at the units, each prospective patient is also interviewed at home by the deputy medical officer of health, thus providing additional information about home conditions and difficulties. An innovation has been the introduction of half-day attendance at the units, and this has been found to be particularly advantageous to those whose domestic arrangements do not allow an early start and to those who would find the whole day excessively tiring.

During the year, the alterations necessary in cases of renal dialysis have been carried out under the co-ordination of the Medical Officer of Health. The Head Occupational Therapist assesses the home conditions and plans the necessary alterations and installations. Already three units have been installed and a further four are expected to be in operation very shortly.

The demand for priority rehousing has continued at a high level and during 1967 a total of 7,087 applications were received for rehousing on medical grounds.

The ambulance service has continued to develop very satisfactorily. Eleven cadets were recruited in February, 1967 and seven already recruited, completed their full course, sat the preliminary examination of the Institute of Ambulance Personnel in April, passed and became fully operational in June. During the year there was a slight decrease in the number of patients moved. One likely explanation is that the majority of these were inter-hospital transfers which previously had been moved by ambulance vehicles and are now moved by the special vehicle bought by Walton Hospital. One of the outstanding achievements of the ambulance service was that a team from the Department was successful in winning the national ambulance competition for the first time. This was a great achievement and a just reward for the hard work so many people had put into preparation for this competition.

Environmental health work of the Department has continued at a high level. A total of 4,631 houses were represented as unfit for human habitation and this large number has meant that public health inspectors have had to spend a considerable amount of time on the work associated with slum clearance. Inspections under the Offices, Shops and Railway Premises Act have risen and 7,404 visits were made to registered premises during the year and a total of 5,593 infringements dealt with. During the year, 3,406 samples of food and drugs were taken and analysed and just over 2 per cent were found not to be genuine or otherwise irregular. Close supervision of the food supplies of the City has been maintained, with public health inspectors making daily visits to the wholesale fish market, the wholesale fruit and vegetable markets at Queens Square and Cazneau Street and St. John's Retail Market. Considerable difficulties have been experienced by traders in the Cazneau Street Market due to the partial closure of the market in connection with the approach roads for the second tunnel crossing. During the year the Food Hygiene (Market Stalls and Delivery Vehicles) Regulations, 1966, became operative. The purpose of these new regulations was to remove the stalls from the limited provisions contained for their control in the Food Hygiene (General) Regulations, 1960, and to give wider and more effective powers in order to obtain a much higher standard of hygiene than had previously been possible for this class of food trading. The new regulations have been found to be much more useful and for the first time it has been possible to introduce some control over open air stalls and similar vehicles. The majority of problems concern street traders who sell fruit from barrows parked in the City centre as the barrows are of unsuitable construction and it is impossible for these units to be adequately adapted to comply with the requirements of the new hygiene regulations. Warning letters have been sent to the owners pointing out that their stalls do not comply with the regulations, and court proceedings have now been instituted against a number of traders who have failed to take note of the warnings.

Due to the present financial situation, there has been a slowing down in the introduction of smoke control orders and during the year the operative date of Smoke Control Orders for No. 21 and No. 22 areas had to be postponed.

The Department has continued to be active in the field of rodent control and disinfection and disinfestation and it is satisfactory to report that the levels of such infestations have fallen oft considerably in recent years.

During 1967, the services of the Department have made progress within the limited resources available. We live in a time of financial stringency when considerable changes are occurring and it is essential to ensure that during the transition the community care of our citizens remains effective and efficient. Furthermore, these changes require the acceptance of new attitudes and new approaches by senior and junior staff, and I am pleased to state that the entire staff are attuned to these changes. I thank all my staff for their enthusiasm and loyalty and their aptitude to accept the new approaches which we have been introducing. I would also like to record my thanks to the Chairman of the Health Committee Alderman J. Norton and the Deputy-Chairman for their assistance, and to thank the members of the Health Committee for considering the reports and recommendations placed before them during the year.

I am,

Your obedient servant,

Andrew B. Semple

Medical Officer of Health.

VITAL STATISTICS

	1965	1966	1967
Area (land and inland water)—acres	27,819	27,819	27,819
Population (Estimated by Registrar-General)	722,010	712,040	705,310
Deaths (all causes)	8,300	8,295	8,148
Death rate per 1,000 (unstandardised)	11·5	11·6	11·6
Live Births	14,553	13,557	12,583
Live Birth rate per 1,000 population...	20·2	19·0	17·8
Percentage of illegitimate live births	8·2	9·2	10·3
Stillbirths	269	277	223
Stillbirth rate per 1,000 total (live and still) births ...	18·1	20·0	17·4
Total Births (live births and still births)	14,822	13,834	12,806
Infant Deaths (under one year)	327	308	277
Infant Mortality rate per 1,000 live births	22·5	22·7	22·0
„ „ „ „ 1,000 legitimate births	22·1	22·1	21·6
„ „ „ „ 1,000 illegitimate births ...	26·7	28·8	25·5
Neo-Natal Mortality rate (under 28 days) per 1,000 related live births	14·8	15·2	14·9
Early Neo-Natal Mortality rate (under one week) per 1,000 related live births	13·1	12·8	13·0
Perinatal Mortality rate (stillbirths & deaths under one week) per 1,000 total live and stillbirths	31·0	32·6	30·2
Maternal Deaths	1	—	1
Maternal Mortality rate per 1,000 total births	0·067	—	0·078
Deaths from:—			
Pulmonary Tuberculosis	42	46	44
Death rate per 1,000 population (unstandardised) ...	0·058	0·065	0·062
Non-pulmonary Tuberculosis	1	5	5
Death rate per 1,000 population (unstandardised) ...	0·001	0·007	0·007
Respiratory Diseases	1,288	1,360	1,331
Death rate per 1,000 population (unstandardised) ...	1·8	1·9	1·9
Cancer (all forms)	1,727	1,657	1,706
Death rate per 1,000 population (unstandardised) ...	2·4	2·3	2·4

Births

During the year, 12,583 live births were registered within the City, which represents a birth rate of 17·8 per thousand of the estimated mid-year population. The number of illegitimate live births was 1,296, this being 10·3 per cent of the total live births. This figure was a further increase in the percentage of illegitimate births, which is higher than it has been for 21 years. The birth rate within the City continued to be higher than the average for England and Wales, which for the year 1967 was 17·2 per thousand.

Stillbirths

The 223 stillbirths registered in the City during the year represent a stillbirth rate per thousand total live and stillbirths of 17·4. The stillbirth rate among illegitimate babies was 21·9 and among legitimate babies 16·9 per thousand.

Mortality

There were 8,148 deaths registered within the City during the year, 4,124 males and 4,024 females. This gives a general death rate of

11·6 per thousand, which is the same as that for the preceding year. The number of deaths from cancer of the lung was 503. Deaths from tuberculosis during the year were 49 as compared with 51 in the previous year. The trends of mortality of certain specified diseases are given in the tables in the statistical appendix.

Infant Mortality

The infant mortality rate fell during the year to 22·0 per thousand live births as compared with 22·7 for the previous year. A total number of 277 infant deaths occurred, of which 33 were illegitimate children. This represents a legitimate infant mortality rate of 21·6 per thousand, and an illegitimate infant mortality rate of 25·5 per thousand. The neonatal mortality rate (under 28 days) was 14·9 as compared with 15·2 for the previous year, whilst the early neonatal mortality rate (under one week) was 13·0 as compared with 12·8 per thousand related live births. The principal causes of infant mortality are represented in the diagram below.

PRINCIPAL CAUSES OF INFANT MORTALITY—1967
(UNDERLYING PRIMARY CAUSE)

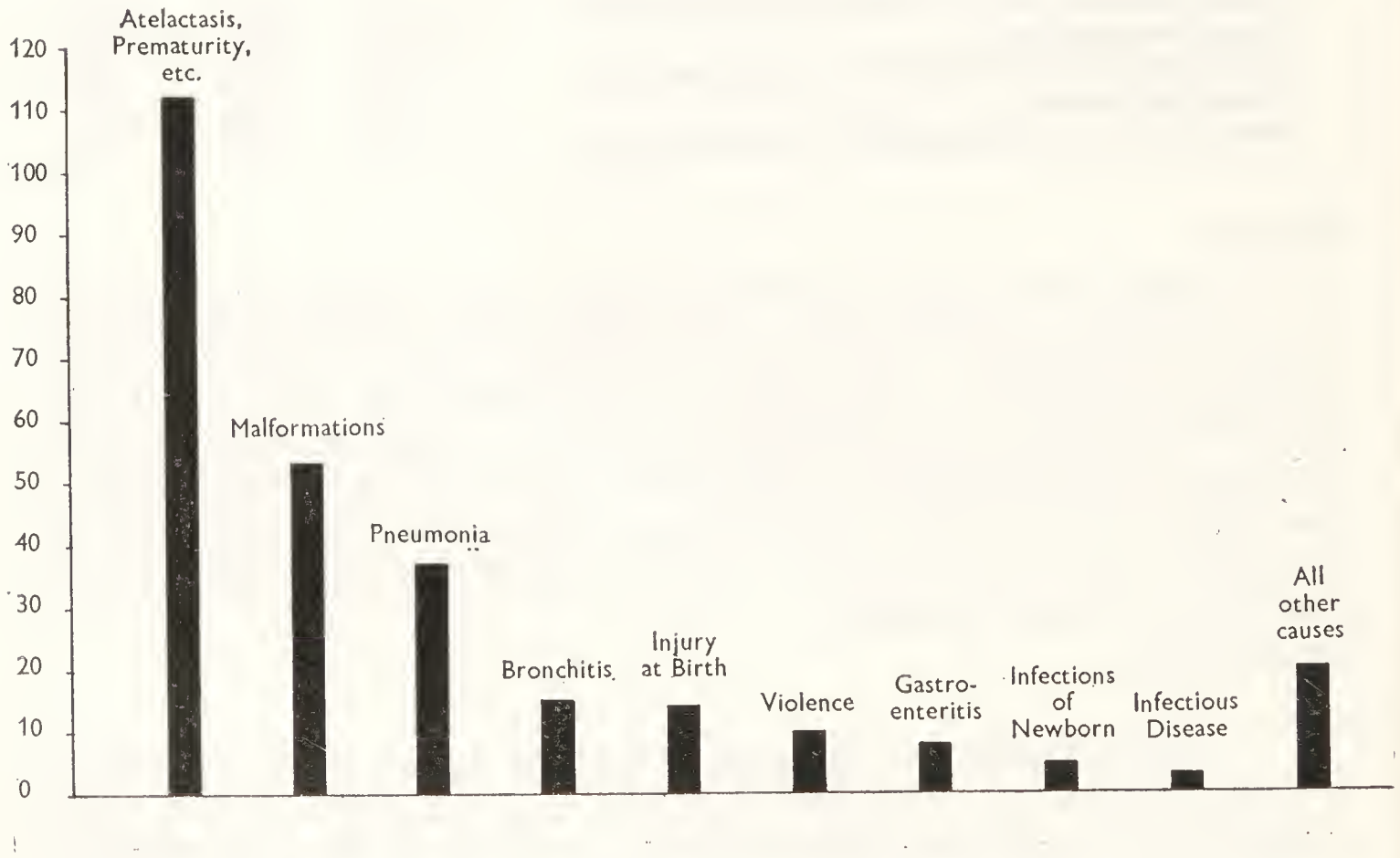
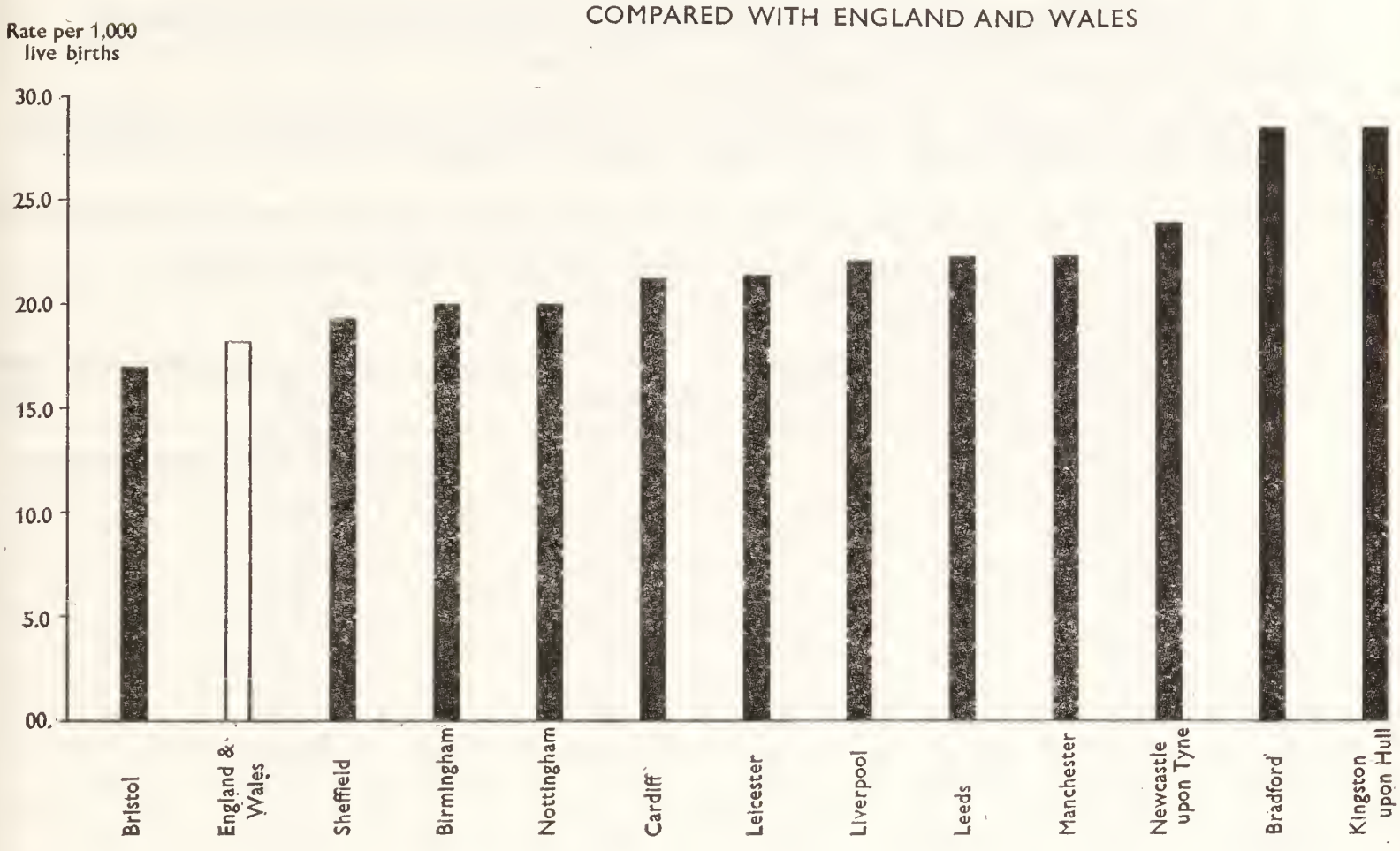


CHART SHOWING INFANT MORTALITY RATE FOR A NUMBER OF THE LASGER AUTHORITIES FOR THE YEAR 1967, COMPARED WITH ENGLAND AND WALES



Perinatal Mortality

This rate, which is the number of stillbirths and the number of deaths in infants under one week per thousand births, is being increasingly used in statistics and it represents very fairly the hazards of childbirth. During 1967 the rate was 30·2 compared with 32·6 in 1966.

Child Mortality

The various causes of child mortality both in total and for specific diseases are given in the table illustrated below.

YEARLY MEAN NUMBER OF DEATHS IN SUCCESSIVE QUINQUENNIA, 1920-1964, AND TOTAL DEATHS IN THE YEARS 1965, 1966, and 1967.

Year	Deaths under 1 year of age	DEATHS, 1 YEAR AND UNDER 5 YEARS OF AGE							
		Total, 1 year and under 5 years of age	Infectious Diseases (including T.B.)	Respiratory Diseases	Digestive Diseases	Measles	Whooping Cough	Diphtheria	Scarlet Fever
						Included in Infectious Diseases			
1920-24	2,278	1,349	557	513	121	202	109	62	28
1925-29	1,879	1,252	564	461	121	227	118	61	23
1930-34	1,601	890	456	278	63	200	72	79	9
1935-39	1,283	487	243	147	30	79	46	58	3
1940-44	1,140	366	160	94	17	27	23	45	1
1945-49	1,100	168	67	36	13	8	15	9	—
1950-54	553	100	26	22	5	2	4	—	—
1955-59	432	57	7	12	5	1	—	—	—
1960-64	426	52	3	11	3	1	1	—	—
1965	327	42	3	6	—	1	—	—	—
1966	308	49	2	11	3	1	—	—	—
1967	277	42	4	8	4	1	1	—	—

Deaths from Cancer

The total number of deaths from cancer during the year was 1,706 as compared with 1,657 in 1966. The number of deaths from cancer of the respiratory tract decreased slightly from 528 to 503.

Motor Vehicle Accidents

This year there has been a significant drop in the number of deaths from motor vehicle accidents. The following figures relate to deaths of Liverpool residents only, including those killed whilst outside Liverpool. Non-Liverpool residents killed in Liverpool are excluded:—

Year	Deaths from motor vehicle accidents	Deaths registered outside Liverpool (included in previous column.)
1957	93	21
1958	78	13
1959	98	25
1960	119	22
1961	112	24
1962	81	12
1963	86	17
1964	105	21
1965	115	20
1966	115	25
1967	101	17

An average of one-fifth of the total deaths relates to deaths of Liverpool residents occurring outside the City.

Introduction of Computer Techniques

In previous years, the sorting and tabulating and the subsequent analysis of vital statistical data has been carried out by manual and semi-manual means. Small groups of data have been sorted on simple hand-sorted punch cards and larger groups on Hollerith type cards, sorted and tabulated electro-mechanically. Because of the limitations of time, only routine type of processing has been undertaken. Any work involving elaborate and sophisticated statistical methods has needed to be limited to the investigation of small items.

With the introduction of the electronic digital computer with its capability of handling large quantities of data at high speed, more elaborate techniques have become available. Initially, small "one off" procedures have been operated on the University of Liverpool K.D.F.9

Computer by kind permission of the University Department. These have served as a useful pilot and as training for the staff involved prior to the use of the more extensive facilities offered by the Corporation I.C.T. 1904 installation.

The high capacity and multi-channel facilities for data processing possessed by the I.C.T. 1904 Computer have meant that facilities are now available for applying more elaborate and sophisticated procedures of data handling to large volumes of routine information, thus providing a far more accurate interpretation of its meaning than was previously envisaged possible.

Although the rate of handling of information put into the computer is extremely high and the rate of print-out of the results extremely fast, the preparation of the program of instructions necessary to operate the machine is slow and extremely laborious. Furthermore, the preparation of these programs requires a level of human accuracy of 100 per cent. One small computer run taking only minutes may require months of preparation by the staff involved. Similarly, the preparation of the data to be processed in a form the computer can accept is almost as large a task. Much of this work has never been done before and so ready-made programs have not been available for direct adoption. Fortunately, when the initial preparation has been carried out this does not require repetition every year. The same programs will operate the data indefinitely and will require only minor modifications to match new types of enquiry that might arise in the future.

During 1967 the whole of the death statistics were sorted by the I.C.T. 1904 Computer; the tables in this report have been produced from this data. The new system has converted the previous system of analysis of causes of death with improvements and additions. This has covered the analysis for the Annual Report and a preparation of Weekly Analyses by the same method. The first major improvement has been the introduction of the sorting of the occupations of the persons whose deaths have been recorded, which now enables the preparation of occupational class and specific occupational mortality statistics. At the same time the range of age and sex grouping has been enlarged to provide for more elaborate and detailed information. This will be of great value, in particular when the Handicapped and "At Risk" Register is computerised, a piece of work which is hoped to be carried out during 1968.

Until now, although doctors have completed death certificates by including not only the primary causes of death but the underlying primary and secondary causes of death, the limitations of the data handling capacity have meant that only one cause of death has been used in the preparation of vital statistics. Now, for the first time, all causes, including secondary causes, have been sorted and tabulated. This means

that as well as being able to prepare tables of one cause of death, as has been done now for many years, it has now been possible to prepare, in addition, tables showing other primary, and all secondary causes of death. For special occupational groups, an analysis of causes of death has been carried out. As a starting point, for the first year's computer run, the occupational groups chosen have been clerks, firemen and police, and dock labourers. The new sorting of vital statistical data for 1967 has the facility for the preparation of standardised mortality ratios manually. Work has already commenced on devising a more accurate method of calculating these ratios, the whole of the procedure being carried out within the computer instead of manually. In order to take into account in calculating these ratios the age and sex distribution of the persons in the group, overwhelmingly large numbers of arithmetic calculations would require to be carried out. This has meant that such calculations in the past have been impossible. The facility provided by the electronic digital computer to carry out rapidly extremely large numbers of arithmetic sums now brings the task within the realms of practicability. There is now a far more accurate and clearer understanding of the pattern of mortality in the City.

MATERNITY AND CHILD WELFARE

Register of Children at Special Risk

The register of children likely to develop a handicapping condition was kept in 1967 as in previous years. The condition of the children was reviewed at six-monthly intervals, and the name of any handicapped child transferred to the special register of handicapped children. After two years, if a child has remained healthy the name is removed from the register.

The following table shows the number of abnormalities arising in children placed on the register in 1965:—

Reason for Admission	Total Number Registered	Number of Deaths	Number Untraced	Number of Abnormalities excluding Deaths	Type of Abnormality
Suspected Congenital Abnormality	203	4	90	26	8 Congenital Heart Disease 4 Mongols 5 Spina Bifida or Meningomyelocele 3 Orthopaedic defects 1 Fibrocystic disease 1 Adrenogenital syndrome 2 General mental retardation 1 Blind 1 Encephalocele
Breech Delivery	145	1	36	11	3 Defects of feet and legs 3 Still under hospital investigation 1 General mental retardation 1 Hypothyroidism 1 Squint 1 Coeliac 1 Hemiplegic
Caesarean Section	399	4	138	23	13 Mental retardation, speech defects and convulsions 2 Defects of feet 2 Hypospadiasis 2 Squints 1 Congenital Heart Disease 1 Hemiplegia 1 Chesty 1 Skin condition and behaviour problem

Reason for Admission	Total Number Registered	Number of Deaths	Number Untraced	Number of Abnormalities excluding Deaths	Type of Abnormality
Prenatal Causes	248	2	58	12	3 Mental retardation 1 Asthma 1 ? Deaf 1 Hypercalcaemia 2 Squints 3 Orthopaedic defects 1 Hare Lip
Perinatal Causes	662	10	152	34	17 Mental retardation (6 severe) 4 Urogenital abnormalities 3 Orthopaedic defects 2 Congenital Heart Disease 1 Hemiplegia 1 Mongol 1 Asthma 1 Coeliac 1 Poor physical condition 1 Epileptic 1 Lipoma umbilical region 1 Observation for Retinitis Pigmentosa
Poor Family History	62	—	18	8	4 Repeated Infections 2 Squint 1 Cretin 1 ? Epileptic
Rhesus and Other Blood Incompatibilities	115	1	23	6	3 Convulsions and mental retardation 1 Cleft palate 1 Congenital Heart Disease 1 Frequent Chest Infections
Premature Births	526	23	142	22	9 Spastic or mentally retarded 3 Chest infections 3 Congenital Heart Disease 1 Talipes 1 Diabetic 1 Coeliac 1 Primary Tuberculosis 1 Mongol 1 Aplastic anaemia 1 Squint
Twins	237	3	69	8	2 Orthopaedic Defects 1 Myopic 1 Chest Infection 1 Undescended Testicle 1 Sucrose intolerance 1 Mental retardation 1 ? Mental retardation

Handicapped Children's Register

A register of children with congenital abnormalities, or any other handicapping condition, was kept during 1967, as in other years. The Medical Officer of Health was notified of any abnormality obvious at birth by the hospital and domiciliary midwifery services, and an abnormality, or handicap, developing later, was referred from the register of children at special risk, from the health visitor, or from a hospital. A similar register of congenital abnormalities is maintained at Alder Hey Children's Hospital, and there is regular interchange of information on the subject.

During 1967, 457 children were notified compared with 463 in 1966, and the abnormalities occurred in different systems as shown below.

Central Nervous System		
Defects of the Brain :	Epilepsy	2
	Cerebral palsy	1
Anencephalus		38
Encephalocele		6
Hydrocephalus		27
Microcephalus		2
Spina Bifida and Meningocele		6
Spina Bifida		14
Meningocele and Myelomeningocele		20
		116
Eye, Ear		
Defects of Eye :	Ptosis	1
	Congenital Nystagmus	1
	Blockage lachrymal ducts	1
Buphthalmos		1
		4
Defects of Ear :	Bifid left ear lobe	1
	Pre-auricular skin tag	1
Defects of Ear causing impairment of hearing:		
No external meatus		1
Accessory auricle		3
		6
Alimentary System		
Pyloric Stenosis		5
Umbilical Hernia		4
Tongue-tie		3
Cleft lip, no cleft palate		4
Cleft palate, no cleft lip		7
Cleft lip and cleft palate		11
Hiatus hernia. Diaphragmatic hernia		2
Oesophageal atresia		1
Intestinal atresia: Ilial stenosis		1
Hirschsprung's Disease		1
Meconium ileus		2
Intestinal obstruction		2
Anal atresia		6
Defects of liver and biliary tracts		1

Other defects of Alimentary System—(con.)	
Gastro enteric cyst	1
Coeliac Disease	1
Rectal defect	1
Pilonidal sinus	3
	56
Heart and Great Vessels	
Congenital Heart Disease	43
Transposition of great vessels	4
Defects of aortic arch	3
Interventricular septal defect	14
Persistent ductus arteriosus	4
Endocardial fibroelastosis	1
Other defects of heart and great vessels	4
Respiratory System	
Defects of Nose: Nasal polyp.	1
Defects of Lung...	1
	2
Uro-Genital System	
Hydrocele	5
Renal agenesis	1
Polycystic kidney, all forms	1
Other Defects of Kidney and Ureter: Horseshoe kidney ...	1
Hypospadias	13
Other Defects of male genitalia: Hooded penis	3
Undescended testicles ...	3
Rudimentary testes ...	1
Defects of female genitalia: Vaginal membrane	1
Imperforate hymen	1
Indeterminate sex	1
	31
Limbs	
Erb's Palsy	1
Defects of lower limbs	5
Reduction deformities (amelia, hemimelia)	3
Polydactyly	8
Syndactyly	7
Dislocation of Hip : Includes subluxed and clicking hips	32
Talipes	30
Other defects of hand	2
	88
Other Skeletal	
Defects of skeleton	1
Defects of skull and face	5
Spinal curvature, scoliosis, lordosis	3
	9

Other Systems	
Bronchial sinus	1
Other defects of face and neck	6
Defects of muscles: Absent left pectoralis major	1
Vascular defects of skin: Naevus haemangioma	20
Other defects of skin	6
Defects of endocrine glands	2
Exomphalos	5
	41
Other Malformations	
Multiple malformations	12
Mongolism	18
Chromosomal syndromes: Phenylketonuria...	1
Other specific syndromes: Rhesus incompatability ...	2
Enzyme deficiency	1
	34
Totals	
Central nervous system	116
Eye and Ear	10
Alimentary system	56
Heart and great vessels	73
Respiratory system	2
Uro-genital system	31
Limbs	88
Other skeletal	9
Other systems	41
Other malformations	34
	460

Midwifery Service

During the year, 338 midwives notified their intention to practise midwifery in the City. This was 33 less than in 1966. Hospital notifications numbered 273, with 53 from domiciliary midwives, and twelve in nursing homes and private practice.

The number of domiciliary births was 1,462 compared with 2,031 last year. The number of patients nursed at home after hospital confinement was 6,353, in 1966 the number was 6,322. This shows that there was a decrease in domiciliary births of 569 from the previous year and an increase of 31 patients nursed at home after hospital confinement, a greater number of these were discharged before the sixth day of the puerperium.

A table is given showing the number of patients discharged from each hospital and the day of discharge. The total was 7,004, but of these 651 were premature babies who were cared for by three specially trained midwives.

The following table shows how the hospital discharges between the second and sixth day have altered during the last three years :—

Midwifery Service — Bathing Demonstration at Home

Midwifery Service — Midwives' Ante Natal Clinic

Health Visitor Attending Hospital Paediatric Clinic — Liaison between Hospital and Domiciliary Se

Health Visiting Service — Phenylketonuria — Testing of New

	2nd day	3rd day	4th day	5th day	6th day
1965	643	636	589	690	1,166
1966	881	709	498	729	1,365
1967	966	729	620	1,043	1,129

Co-operation with Hospital Services

Co-operation between the domiciliary and hospital midwifery services is very good, and an example of this was shown by the liaison during the period of the gastro-enteritis outbreak in the Maternity Unit at Walton Hospital which commenced in June. As soon as the presence of infection was confirmed, two midwives were nominated to visit only those patients who were discharged from Walton Hospital. When the Maternity Unit closed on 2nd October, ante-natal patients could no longer be admitted for observation, and this treatment had to be provided by the general practitioner and the domiciliary midwife under the instructions of the consultant obstetrician. A domiciliary midwife therefore attended all the hospital ante-natal clinics, and undertook the supervision of 34 patients in their own homes, as they could not enter hospital. Liaison was also maintained between the hospital ante-natal clinics and neighbouring local authorities where certain patients lived.

Medical Aid

The midwives called in medical aid for 332 cases for different abnormalities. In 303 cases a doctor had already been booked for maternity medical service. Of the 332 cases, 41 were for patients discharged early from hospital for domiciliary attendance. Details are given in the statistical appendix.

Puerperal Pyrexia

During 1967, 287 cases of notifiable puerperal pyrexia were notified and of these, 285 occurred in hospital and two in the home of the patient. Full details are given in the statistical appendix.

Staff

The midwifery staff at the end of the year consisted of :—

1 Non-Medical Supervisor
2 Assistant Supervisors
1 Training Superintendent
1 Midwifery Tutor
41 Full-time Midwives
3 Premature-baby Midwives
4 Part-time Midwives

During the year, one of the Assistant Supervisors retired and a domiciliary midwife was appointed to this post. A domiciliary midwife was appointed to the vacant post of tutor, and five other midwives left the staff, two of them due to retirement. Two new midwives were appointed to the staff in 1967.

Training of Part II Pupil Midwives

The training scheme continued with pupil midwives from Sefton General Hospital, Liverpool Maternity Hospital, Mill Road Hospital and Broadgreen Hospital. An average of 29 pupil midwives each quarter worked under the supervision of their district teaching midwives, and tutorials and practical teaching were given by the tutor and the training superintendent. One hundred and sixteen pupils took the course and 110 qualified as midwives. At the end of the year, 33 were still in training. During 1967, 37 midwives worked as approved district teachers.

Student nurses undergoing obstetric training at Sefton General Hospital, Liverpool Maternity Hospital and Broadgreen Hospital continued to visit the domiciliary service and spend a day on the district. An average of 29 students every three months spent a morning visiting with a midwife and attended a child welfare clinic in the afternoon.

Accommodation

Twenty-seven midwives occupied Corporation houses or flats, six midwives lived in furnished accommodation.

Transport

Thirty-five midwives were car owners and drivers, one used a scooter, six midwives were cyclists and six used public transport.

Equipment

Thirty more Entonox gas/oxygen machines were purchased during the year. These replaced the old gas/air machines which had become obsolete. The new machines, whilst giving the same relief from pain, are more beneficial to the condition of mother and child.

The scheme for autoclaving pre-packed bowls and instruments for use by the teaching midwives continued to work satisfactorily, and more disposable equipment was used.

Ante-Natal Care

Ante-natal care of the mother was carried out at 28 general practitioner clinics, at local authority clinics run by the midwives, and also by visits to the homes of patients.

Midwives attended 1,330 sessions with family doctors, 211 sessions at medical officers' clinics and 2,379 at their own clinics. Visits to homes of patients numbered 16,569.

Domiciliary Deliveries

The total home confinements were 1,462 which was a decrease of 569 from last year.

Midwives paid 25,100 visits to their booked cases, 31,336 to mothers and babies discharged from the hospitals before the end of the lying-in period and 5,388 to patients referred from hospitals for the assessment of home conditions.

Post-graduate Courses

The statutory courses in various parts of the country were attended by nine midwives and one supervisor.

The Transfusion Unit

The Emergency Obstetric Flying Squad was called out twenty times to the homes of patients. Blood transfusion was given in four cases.

Reasons for calling the unit were :—

Retained placenta	11
Post partum haemorrhage	5
Ante partum haemorrhage	1
Other causes	3

Eight patients were transferred to hospital, twelve were able to remain at home.

Emergencies

Midwives were called to emergencies by the ambulance service on 58 occasions. These were cases who were booked for hospital, but called the ambulance too late, or patients who had received no ante-natal care at all. In all, 43 mothers were transferred to hospital in labour or immediately after delivery, and fifteen mothers and babies were nursed at home.

Consultants were called to midwives' cases seven times, on four occasions because of the condition of the mother, and the other three because of concern for the baby.

Premature Babies

Of the 24 premature babies born at home, all were able to remain there; 651 premature babies born in hospital were later discharged to the care of the specially trained midwives. Among those babies discharged from hospital were 32 sets of twins, five babies who were one of twins, and one set of triplets.

The midwives caring for premature babies made 381 visits to home deliveries, and 2,974 visits to those discharged from hospital. They also visited 123 homes before the babies were discharged, to advise the mothers on conditions suitable for small babies.

Equipment loaned was as follows :—

Hot water bottles and covers	...	18

Health Visiting Service

The new Family Health Centre in Livingston Drive was completed during the last few days of 1967, and the staff moved in, with great enthusiasm, to start their activities on the 1st January, 1968. As was mentioned in last year's Report, the building progress on this centre was watched with great interest by all those in the area who were going to benefit from the facilities afforded to them. It is satisfactory to report that the Maternity and Child Welfare Section is functioning and that the Welfare Section will be open shortly, and the old and young together will enjoy the benefits of this nicely situated centre.

Training

As usual, the health visitor course commenced in September. Twenty-six students entered the course, but because of domestic reasons one had to withdraw. One student was sponsored by the Government of the Bahamas, seven by Lancashire County, two by Wigan, one by Flintshire, three by Birkenhead, two by Southport, three by Cheshire County and six by our own local authority.

Staff

Despite ten new appointments during the year, the number of health visiting staff had dropped by the end of the year to 105 compared with 109 at the end of 1966. Three of the most senior staff, including the Deputy Superintendent Health Visitor, retired, and three of the staff had long terms of illnesses and two others had maternity leave. Staff, at the end of the year, was made up as follows :—

1	Superintendent
1	Assistant Superintendent
1	Tutor
17	Group Advisers
11	Field Work Instructors
59	Health Visitors
1	Part time Health Visitor
2	Full time State Registered Nurses
12	Part time State Registered Nurses,

Despite staff shortages the work of the health visitors continued normally, and the demand for help and advice from them increased. It

is interesting to note that more requests came from the general public, who visited the local centres or visited the health visitors' section in the Health Department.

Two more general practitioners requested the services of a health visitor, and altogether nine of the staff were in attendance for the purpose of liaison.

Care of Children

Twelve thousand, five hundred and eighty-three babies were born alive to women residing in Liverpool, and with the number who moved into the City shortly after birth, 14,045 babies were visited for the first time. Nine hundred and forty babies were born prematurely and 834 survived more than one month. This group of babies is born "at risk" and naturally requires more care and attention from the health visitors, particularly during the first month of life. Their parents are anxious and need a great deal of support, as do all those whose babies are born "at risk" for other reasons.

To children under the age of five years the total number of visits paid was 173,698. Six hundred of these children were found to need some specialist advice regarding their physical or mental health, and these were referred to the School Health Department for the following types of investigation :—

Mental and physical assessment ...	33
Hearing tests	40
Educational tests	34
Speech defects	33
Eye defects	292
Orthopaedic defects	168

This was an increase of 100 compared with the figures for 1966.

The Phenistix test for phenylketonuria was carried out on infants during the first two weeks, and again during the fourth and sixth weeks. Also, in conjunction with Alder Hey Children's Hospital, 10,468 Guthrie urine tests were made for the same condition. In July, 1967, in conjunction with Alder Hey Children's Hospital, an investigation was started to determine the acceptance and reliability of Guthrie tests on blood samples obtained by the health visitors. This procedure was undertaken by health visitors in the Everton area of the City, and by the end of the year, 1,762 blood tests had been taken. As a result of these tests, two positive cases were discovered in babies under the age of one month. In these days, when babies with this condition can be successfully treated, it is very gratifying that out of so many thousands tested, the two who needed treatment were found.

During the year, 80,823 people were visited by the health visitors; 66,707 were pre-school children, and the remainder, 14,116, were special

cases, mainly the elderly and families with problems. Nearly 10,000 visits were made to the elderly, of whom a large number were sick and required the use of nursing aids. To ensure that this equipment is used to the best advantage, it is renewed when necessary, and is returned when no longer required; a state registered nurse visits those who borrow it, to give help and advice. The consultant geriatricians made great demands on the services of health visitors in cases where elderly persons had been referred for admission to hospital. Many of these admissions were rendered unnecessary, or postponed, by the fuller use of domiciliary services, or were expedited when necessary, as a result of the close co-operation between the hospital and health visiting services. Convalescent care was arranged for 97 men and women over the age of 60 years.

Problem Families

The number of families with problems appears to be increasing as is that of the case conferences arranged to discuss the problems. In addition to attending these conferences with other interested social workers, the Group Advisers arranged many meetings at local centres. These conferences have immense value as discussions are held in a less formal manner, and the workers concerned can discuss their problems together in a friendly atmosphere, and very often, by their conclusions, obviate the need for discussion at a higher level.

This kind of work cannot be undertaken without the help and advice of other social agencies, and during the year, 5,500 calls or visits were made to :—

General Practitioners
Medical Social Workers at hospitals
Welfare Department
Mental Health Service
Children's Department
Health Inspectors
Ministry of Social Security
Disablement Resettlement Officer
Probation Officers
National Society for the Prevention of Cruelty to Children
Home Help Service
Moral Welfare
Education Welfare
Occupational Therapists
District Nurses and Chiropodists

Convalescence

Fifteen mothers and 128 children went away for periods of convalescence ranging from two weeks to three months. In the first instance this was arranged so that mothers, who for health reasons

needed rest and relaxation, could go away and return refreshed to make a new start; in the second instance, children who went away unaccompanied did so because of their poor health, and benefited from the fresh air and good food.

Vaccination and Immunisation

The response to advice regarding vaccination and immunisation was disappointing, and in 1967 there was a considerable drop in the number of children being presented for this prophylactive treatment at health clinics, but more children than before received inoculations from their family doctors. The following is a summary of doses given at the local authority centres :—

Poliomyelitis vaccine	18,755 doses
Triple Antigen	16,334 injections
Vaccination against Smallpox ...	2,374

Special Work

Diabetes

The health visitor specialising in the follow-up of persons suffering from diabetes had a very busy year. She is now well established in this field, and doctors and social workers asked more and more for her help and guidance. Towards the end of the year she was asked by the Liverpool University Genetics Department to assist them in research into the comparable zinc content of urine of diabetics and their families, and non-diabetic families. This involved an additional amount of home visiting. She attended consultants' clinics in hospital, and visited 759 diabetics throughout the year. This visitor also took part in the educational field by giving talks to nurses in training and supplied written information to students in preparation for their projects, including one student as far away as Scotland.

Neurological Conditions

The health visitor associated with the neurological unit at Walton Hospital also had a busy year. She attended the consultant's clinic three times a week, and visited nearly 500 patients throughout the year. This year, as last, she accompanied a group of her patients for a period of convalescence in Porthcawl. It was a busy fortnight and hard work, but great satisfaction was derived from the fact that all her patients enjoyed the stay at the seaside and benefited greatly from the change.

General Liaison

Liaison work with hospitals continued and all ante-natal units and three paediatric units were covered. The health visitors doing this work are now recognised as an integral part of the hospital team, and as such are doing valuable work. Colleagues in hospital are becoming

more aware of the health visitors' function, and make use of their knowledge and experience.

Requests for speakers at all types of meetings are increasing year by year, and the emphasis this year has been on "Services available to the Community".

Visits to centres by post-graduate students from the Mabel Fletcher Technical College and the William Rathbone Staff College also increased this year, and on each occasion the students were given a talk by a senior health visitor.

School children writing theses in their last year at school were frequent visitors to the department, seeking information about various aspects of physical and mental health. Student nurses also continued to visit centres during the last stage of their hospital training, and all groups, as well as seeing what service was offered to the community, had a lecture from a senior member of the staff.

V.D. Welfare

There was no significant change in the work undertaken by the nurse responsible for the follow-up of women and children suffering from venereal disease. Towards the end of the year, however, she was asked to undertake some of the visiting usually done by a visitor from one of the other hospitals, and this of course involved more of her time. The following is a summary of her work :—

	1967	1966
Number of cases written to...	282	294
Number of letters despatched	506	459
Number of cases reporting after receipt of letter... ...	192	158
Number of letters returned (dead letter office)	17	26
Number of cases visited	275	226
Number of visits made	1,073	852
Number of cases reporting after visiting	183	143
Number of cases promising, but failing to attend ...	19	24
Number of cases removed or not known at address given	48	34
Number of cases not contacted	21	18
Number of cases refused to attend...	2	6
Number of cases transferred to other clinics	1	1

Maternity and Child Welfare Clinics

The number of centres operating throughout the City in 1967 was 28; at these, 62 child welfare sessions and ten ante-natal sessions were held each week.

Attendances of mothers at ante-natal clinics for pre- and post-natal examinations and for blood examinations numbered 1,390. The midwives dealt with 952 mothers, who made 5,281 attendances.

Mothercraft and relaxation classes were conducted by health visitors throughout the City at seventeen centres. Fourteen were held in local authority centres; two in Mother and Baby Homes, and one in Mill Road Maternity Unit. Altogether, 921 expectant mothers attended these classes and made 3,930 visits.

Cytology sessions were held at nineteen centres and at the end of the year, 57 sessions were held over a five-week period. Two thousand nine hundred and thirty-six cervical smears were taken at these sessions for examination at the Liverpool University, Broadgreen Hospital, Walton Hospital and Sefton General Hospital.

The following is a summary of the centre activities :—

	1967	1966
Total number of centres at which ante-natal clinics were held ...	10	10
Number of clinic sessions held per week (medical)	10	10
Number of cases attending ante-natal clinics (doctors' sessions)	1,355	1,354
Total attendances at ante-natal clinics (medical officers' sessions)	1,415	1,832
Total attendances at post-natal clinics	35	39
Total number of new cases attending midwives' ante-natal clinics	980	1,400
Total attendance at midwives' ante-natal clinics	5,281	7,431
Number of centres at which health visitors conducted relaxation and mothercraft classes	17	19
Number of mothers attending mothercraft and relaxation classes	921	920
Number of attendances at above	3,930	4,412
Number of mothers attending who were booked for hospital delivery	890	876
Total number of centres at which child welfare clinics were held...	28	28
Number of clinic sessions held per week	62	62
Number of new cases—under one year	7,971	8,277
one to five years	665	838
Total number of children who attended	16,817	17,146
Total attendances—under one year	59,385	61,743
aged 1—2 years	10,303	11,634
aged 2—5 years	11,295	14,200
Total number of centres at which cytology clinics were held ...	19	19
Total number of sessions held	459	407
Total number of smears taken	2,936	2,909

Cervical Cytology

This service continued to be available to women at maternity and child welfare centres, and during the year three firms approached the department on behalf of their staff. Sessions were arranged at these factories.

The variation in the monthly attendance is shown below :—

January ...	...	340
February...	...	297
March ...	...	228
April ...	...	312
May ...	...	318
June ...	...	279
July ...	...	224
August ...	...	281—including one department store
September	...	208
October ...	...	251—including one factory
November	...	177
December	...	122—including one factory
Total for Year	...	3,037

Smear Reports

No. of smears which were technically unsatisfactory and were repeated	28
No. of smears showing some abnormality requiring hospital observation (not thought to be carcinoma *in situ*)	30
No. of smears showing carcinoma *in situ* (hospital treatment in all cases)	6
No. of frank carcinoma of cervix	7

In addition, very many women have been referred to their own doctors or to hospital for the treatment of other disorders.

The following table shows the number and type of condition for which these patients were referred :—

Erosion of cervix	441
Fibroids	11
Cervical polyps	46
Vaginal discharge	339
Vaginitis (mainly senile)	75
Prolapse needing treatment...	1
Low haemoglobin reading (anaemia)	30
Breast neoplasms—mainly benign	3
Menstrual disorders	50
Others	101

Chiropody Service

During 1967 the chiropody service continued to provide free treatment to women over 60 years, men over 65 years, expectant mothers, diabetic patients and handicapped persons. Treatment was carried out at sessions held at the Central Foot Clinic, maternity and child welfare clinics and aged persons' clubs. Three new chiropody rooms came into use at the end of the year at Livingston Drive, Speke, and Long Lane, Fazakerley.

Two full-time and 27 part-time chiropodists undertook this service.

Total number of treatments given	39,198
At clinics	35,695
At home	2,829
At hostels to aged and handicapped persons	674
Total number of patients...	9,429
Total number of domiciliary patients	950
Total number of patients at clinics etc. ...	8,479
Total number of sessions...	4,978
Total number of clinic sessions	4,830
Total number of sessions in hostels	148

District Nursing Service

It is not generally appreciated that Liverpool is the City in which the concept of nursing the sick in their own homes was first realised, and now, over 100 years later, this City is justifiably proud of a District Nursing Service which makes an average of 33,533 nursing calls each month.

The nursing care a district nurse is called upon to give varies greatly and every type of illness is nursed. The psychological importance of nursing sick people in their own homes cannot be emphasised, and the provision of an efficient and highly trained staff makes this possible in many instances where the only alternative would be removal to hospital. The district nursing sister not only provides nursing care, but is able to teach the attendant relatives how to care for the sick member of their family during the intervals between her visits.

There was an increase in the number of heavy nursing cases being undertaken by the District Nursing Service, and there was a further decline in the treatments requiring intramuscular or hypodermic injections. The diagram on page 25 indicates the fall in cases requiring injection since 1961.

The number of patients attended during 1967 was 13,684 and the total number of visits to these patients amounted to 402,401, an increase of 465 and 13,997, respectively, compared with 1966. In addition, 2,087 ambulant patients received 12,726 treatments at the clinics run by the district nursing service.

The following tables show the amount of work undertaken by the district nursing service in 1967 compared with 1966.

	1967	1966
Patients	13,684	13,219
Visits	402,401	388,404
Number of patients aged 65 years or over ...	6,011	5,857
Number of visits to such patients	215,657	199,556
Number of children under 5 years	643	649
Number of visits to such patients	4,048	3,942
Number of late night visits	5,851	4,427

Number of patients attending clinics.

	1967	1966
Number of patients attending District Nursing Centres	275	234
Treatments	4,314	4,306
Number of patients attending Toxteth Health Centre	1,812	1,789
Treatments	8,412	11,026
Injections as percentage of total visits ...	32·53	33·11

New Centres

Two new district nursing centres were opened in 1967, one at Fazakerley and one at Speke, to serve the public of these rapidly developing areas. Each building is provided with a well designed clinic to meet the needs of patients who are ambulant.

Special Nursing

A special nursing service was started in 1966 for those children suffering from spina bifida. Apart from normal nursing care, these children and their families require extra assistance and advice to help them to overcome the various handicaps associated with this condition. This particular service is provided by district nurses who work in close co-operation with Alder Hey Children's Hospital, the school health service, the occupational therapy service and other sections of the Health Department. As a result, some children have been able to attend school, and they and their families are enjoying more normal lives.

Number of children	292
Number of visits	1,222

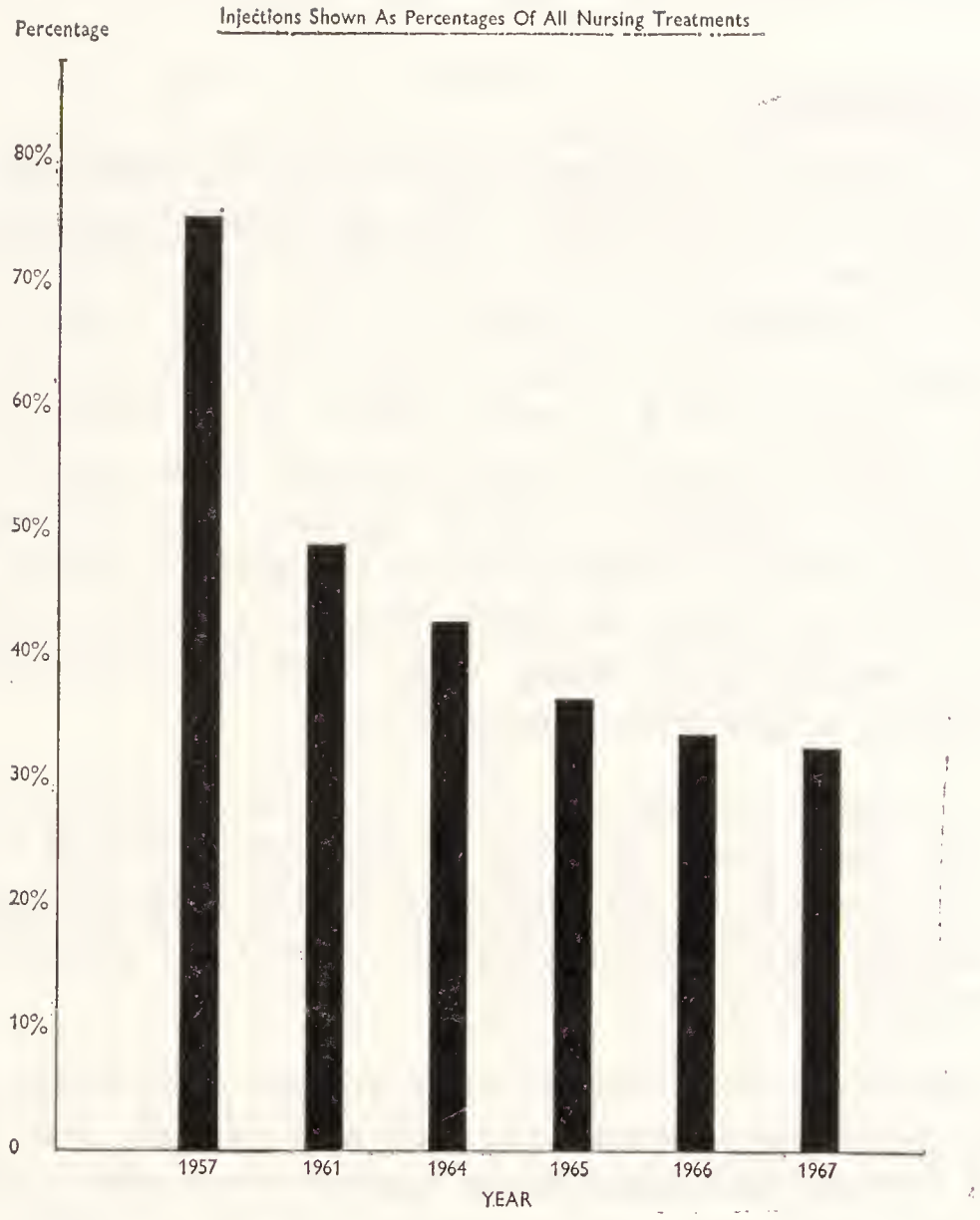
Training

During 1967 the Queen's Institute of District Nursing notified local authorities that they would not act as an examining body after May, 1968. The Ministry of Health will in future set the examination for district nursing, and each training school will conduct its own examination. The approval of Liverpool Health Department as a District Nurse Training School was sought at the end of the year from the Ministry of Health. It is hoped that training will continue unchanged.

During 1967 eighteen nurses were trained and successfully passed the examination set by the Queen's Institute of District Nursing, fifteen of these were trained for Liverpool, two for Caernarvon County Council and one for Bootle County Borough. A further twenty students were given theoretical instruction for a period of three weeks in the first instance, and twelve study mornings thereafter.

DISTRICT NURSING SERVICE

Injections Shown As Percentages Of All Nursing Treatments



During the year programmes were arranged for 250 hospital student nurses to make visits of observation with the district nursing sisters.

Visits were made to Liverpool by several senior nursing officers and student tutors from other Health Authorities, seeking advice and information on staffing and the general administration of the service.

Twenty-five lectures were given in hospitals and many lectures were given to voluntary societies and other interested groups on the structure and function of the district nursing service in Liverpool.

Day Nurseries

The twelve day nurseries run by the Corporation continued to provide places for 670 children. One, in Upper Canning Street, is due to be demolished in June, 1968, and plans were under way for a new nursery to accommodate 60 children in the same area. This nursery is being designed to care for different aged children in small groups, and will have a special unit for young babies. Each family group numbers about ten children aged from approximately eight months to five years, and in this way siblings can remain together. The children settle down very quickly and learn more easily in the smaller groups than in large groups of their own age; they also feel more secure, having their own nurse for a mother figure. Many of the older day nurseries have adapted their premises to this type of nursery care.

The daily average of child attendance during 1967 was the highest for many years, showing 81 per cent continual occupation, the other 19 per cent being accounted for by the influenza epidemic, which if not actually affecting the children, caused the parent to remain off work, keeping the child at home.

Staff hours were reduced early in 1967 to 42 hours weekly, which included meal breaks because the staff were on call. No extra staff were recruited to cover this reduction in manpower; it was found that parents all over the City were calling earlier for their children and, as this became evident, it was possible to close most of the day nurseries at 5.30 p.m. instead of 6 p.m. thus shortening the working day. The nurseries were staffed until 6 p.m. by a skeleton staff, to provide this amenity for parents who could not call at the nursery by 5.30 p.m.

During the influenza epidemic at the end of the year, the nurseries continued to function by transferring children and staff as necessary. At one time, only 50 per cent of day nursery staff were on duty. The children were apparently unaffected and, apart from the usual minor ailments, the health of the children in the day nurseries remained very good.

The demand for day nursery places continued to increase, particularly for cases of domestic emergency and for illegitimate children. The strict priority list had to be maintained, and although there was sympathy for children who wished to attend because of the housing situation or living in multi-storey flats, these applications had to be referred to the many playgroups in the City.

The number of private day nurseries and child minders registered under the 1948 regulations again increased during 1967. Twenty-two day nurseries and nine daily minders were registered during the year, making a total at the end of the year of 56 nurseries and 18 daily minders.

Many of the private day nurseries are groups of children who meet for half a day, two or three times a week, in church halls or other suitable premises; this gives them the opportunity of play with other children in unrestricted surroundings.

HOME HELP SERVICE

Liverpool has a long history of Home Help Service. Originally it was a voluntary organisation, with home helps employed to care for mothers confined at home, or otherwise sick. This organisation was absorbed by the Corporation service in 1945. It is of interest to note that a home help who joined in 1935 is still employed.

Decentralisation

It had been hoped that the process of decentralisation would be accelerated in 1967 to save the time of staff and the expense of travelling and communication. However, the high cost of alterations necessitated the deferment of this scheme.

During the past decade, the emphasis has moved from mothers and families to aged and chronic sick persons and the trend now noticeable is towards a more personal service for food and warmth, with housework a necessity but not the prior need. This was especially noticeable in November and December when hospital admittance was very limited.

4,469 patients received service in 1967; of these
3,756 were aged 65 years or over. Of the younger people
57 were maternity cases;
468 were chronic sick, and
188 were cases of acute illness.

Among the younger patients assisted were two sad cases—

(*a*) A mother aged 35 years with a severe heart condition, whose husband had cared for her until he suffered a cerebral haemorrhage; there were four young children. Conditions in the home were unhappy, the father was occasionally violent and the mother short-tempered and frustrated. Full-time service commenced in March, 1967, and, apart from a short break when the patient was in hospital, it continued until February, 1968, when she died. During her absence and at her death the children were "in care" and their father resided with a relative.

(*b*) A man of 29 years, who was discharged from hospital in March, 1967, with terminal cancer and was expected to survive for a matter of days. He was aware of his condition but wished to be at home with his wife and family of three young children. To enable them to be together as much as possible full-time service was provided to run the home and care for the children. He was in great pain yet despite his condition he lived until June, 1967.

Administrative Staff

During the year, there was an increase of two additional District Organisers, making a total of ten. The Deputy Home Help Organiser was relieved of her area duties in order that she could assist with the problems of the junior organisers and deal with emergencies in their absence. The Senior District Organiser, who had coped with training and a particularly large area, was relieved of part of her area.

Home Helps

The number of home helps employed fluctuated between 630 and 660. Liverpool has usually managed to recruit part-time workers without too much difficulty but there is a very large turnover of staff and during 1967, 234 home helps joined and 219 left. Full-time workers are more difficult to recruit, but in order to stabilise the staff and because so many patients require additional help later in the day, an attempt was made to increase the numbers of full-time staff and this effort will continue.

Cleaners

An innovation in January, 1967, was the appointment of a team of three women engaged to work in dirty surroundings and put the homes in order prior to a home help taking over. They work together in most cases before the patient returns from hospital and, with the written permission of the patient, dispose of the rubbish which usually clutters the home.

The Cleansing section of the Corporation City Engineer's Department has been most co-operative in this venture for they have removed the rubbish when requested to do so. This team of women, who are paid 1s. an hour more than home helps, have been kept fully employed since their appointment.

EPIDEMIOLOGY

The number of cases of notifiable infectious disease occurring in 1967, compared with 1963, 1964, 1965 and 1966 is shown in the table below.

	Notified Cases 1963	Notified Cases 1964	Notified Cases 1965	Notified Cases 1966	Notified Cases 1967
Scarlet Fever	495	638	628	808	536
Whooping Cough ...	1,762	666	425	944	494
Measles (excluding rubella)	4,827	7,124	7,319	5,094	5,771
Poliomyelitis	1	1	—	—	—
Tuberculosis, respiratory	391	273	249	235	234
Tuberculosis, non-respiratory ...	43	28	34	30	29
Diphtheria	3	1	—	—	—
Smallpox...	—	—	—	—	—
Meningococcal Infection	15	15	16	7	3
Acute Encephalitis, post-infectious ...	—	—	2	1	1
Dysentery	383	313	259	372	425
Ophthalmia Neonatorum	97	88	79	62	70
Puerperal Pyrexia ...	356	315	265	230	287
Acute Pneumonia (primary or influenzal)	349	208	205	158	182
Paratyphoid Fever ...	8	3	12	5	1
Typhoid Fever	—	—	—	1	1
Food Poisoning	63	31	72	59	78
Erysipelas	26	17	21	26	20
Malaria (contracted abroad)	10	11	6	3	5
Typhus Fever	1	—	—	—	—
Anthrax	1	—	—	—	2

The general pattern of the incidence of infectious disease in 1967 was similar to that of 1966. The main difference was that fewer cases of whooping cough were notified than of recent years.

Exclusion of Children from School

The total number of children excluded from school on account of infectious disease was 98. The average period of exclusion was 32 days. There was a considerable range in the period of exclusion, the longest period being 82 days and the shortest one day.

Dysentery

During 1967, 425 cases were notified. The following table gives the number of cases of dysentery notified between 1955 and 1967:—

1955	920
1956	369
1957	484
1958	931
1959	407
1960	515
1961	335
1962	296
1963	383
1964	313
1965	259
1966	372
1967	425

When a case is notified the patient is visited and, as soon as possible, a bacteriological diagnosis made. The situation is then assessed and the need for exclusion of contacts is considered. Food handlers and young children are invariably excluded from work or school when found to be positive carriers. In other cases of older children and people not handling food, careful consideration is given to the need for exclusion and this is avoided if it is at all possible, provided that, at the same time, the spread of the disease can be adequately prevented. In some circumstances exclusion can lead to unnecessary hardship, either where the person is excluded from work and so suffers, or where because a child is excluded from school, the parent is unable to go to work. An analysis of the findings on visiting is given in the table below:—

	Dysentery 1967	
	Sonne Dysentery	**Flexner Dysentery**
1. Original uncorrected notifications... ...	607	8
2. Corrected notifications	417	8
3. Notified cases, bacteriologically negative but with symptoms	190	—

Poliomyelitis

No case of poliomyelitis occurred in Liverpool during the year.

Food Poisoning and Salmonella Infection

It is very satisfying to be able to report once again that during 1967, food poisoning and salmonella infection did not present a major health problem. It is now customary to classify outbreaks of food poisoning and salmonella infection into three groups, (**a**) general outbreaks which comprise two or more unrelated cases due to a common cause, (*b*) family outbreaks where two or more cases are related, or (*c*) single cases not connected with any other.

The total number of cases coming to the attention of the Department was 78. Of these, 44 occurred in a series of thirteen family outbreaks and 30 occurred in isolation. There was also one general outbreak in which there were four cases. A table giving the organisms found in notified cases is listed below :—

Organism	Number of persons from whom organism was isolated
Salmonella anatum	7
Salmonella artis	1
Salmonella bredeney	2
Salmonella coley park	1
Salmonella enteritidis	1
Salmonella halifax	1
Salmonella indiana	1
Salmonella london	1
Salmonella panama	6
Salmonella reading	8
Salmonella sheffield	1
Salmonella takoradi	1
Salmonella typhimurium	47
	78

The general outbreak of four cases occurred in September in patients at the end of a general medical ward in a large general hospital. The agent causing the outbreak was Salmonella panama. Each suffered from a moderately severe illness characterised by vomiting. Fortunately, not one died, in spite of the fact that this occurred in already seriously ill persons suffering from other medical conditions. The disease had an acute onset, at various periods of time, during the night, following a midday meal at which each ate of the same chicken. They continued to vomit for one day, but beyond this it was impossible to determine accurately the duration of the salmonella symptoms, since all of the patients were suffering from other medical conditions which confused the issue. Although not proven beyond all reasonable doubt, the evidence suggested strongly that the origin of the infection was a deep-frozen chicken. The deep-frozen chickens were thawed overnight in a warm room and then steam roasted in large batches in trays in the hospital kitchen. To make up a shortage, unthawed birds were placed in the centre of the tray and received the same cooking time as the

thawed ones. They were consequently almost raw when consumed and although bacteriological confirmation was not obtained, since the chicken remains had been discarded, this was the only common factor, the chicken being eaten by each of a small group of patients at one end of the ward.

Gastro-Enteritis

Non-Specific Outbreak in Old Persons' Home

During August, an acute gastro-enteritis outbreak occurred in an old persons' home, affecting three staff members, including the cook and eleven old persons. The pattern of illness was remarkably similar in each case: a short sharp urgent attack of vomiting and diarrhoea, without premonitory symptoms or nausea was in some cases instant and before there was a chance to reach the toilet. In some, vomiting was copious and repeated. The diarrhoea was equally urgent and copious. None of the patients could remember seeing blood in the stools which were very watery. The attacks then passed off fairly quickly and did not recur. The next day all the persons affected felt much better and apparently only suffering from a minimum of residual malaise, although their appetite was slow to return. None had been pyrexial. The time of the onset in each case occurred between 5.30 p.m. and 8.30 p.m. on the same day, except for one case which started at 10 p.m. All the patients had lunch at twelve and tea at 4.30 p.m. Samples of the meals eaten and samples from the suppliers were obtained and examined bacteriologically with negative results. Amongst the staff, the cook, a night attendant and the deputy matron were all affected, all within an hour or so of the main outbreak. Some days previously, a temporarily employed student on the kitchen staff had suffered a similar attack. Faecal specimens submitted by patients and the staff were investigated and all found to be bacteriologically negative.

The kitchen premises were new and in good condition. Apart from a minor matter of ventilation of the staff toilet which was soon remedied by the insertion of air bricks. No fault could be found with the hygiene of the premises. There had previously been minor mouse and cockroach infestations which had already been dealt with. A further isolated case occurred five days later and a further two days after that. These presented the same clinical picture as the other cases. Likewise, bacteriological investigations in their cases proved negative. During the period of the outbreak, admissions were stopped, strict isolation of cases in their rooms was established and arrangements made for a supplementary cook to attend to prepare the food but not to come in contact with any of the affected persons. A group of old persons were due to return from holiday in Southport and arrangements were made for them to continue their holiday for a further week, during which time no new admissions were made. Restrictions were lifted at the end

of two weeks since no further cases had occurred and no untoward sequelae had been reported. Viewed in retrospect the outbreak would appear to have been probably of viral origin.

Enterovirus Survey

The Enterovirus Survey has now covered a period of seven years. Since the length of time to identify viruses may be more than a year, previous reports of enteroviruses isolated in the survey have been incomplete and so a corrected summary has been prepared and is shown in the table on pages 36 and 37.

The poliovirus reported in last year's Annual Report has now been fully identified and was found not to be of a "wild" strain, but of a modified vaccine virus type.

Nineteen viruses have yet to be identified. As in previous years the Coxsackie virus type A has been the commonest pathogenic virus to be isolated and the only virus to coexist with other viruses with the exception of the three polio vaccine strains.

Two polio isolates have been examined and found to have properties intermediate between those shown by "wild" and vaccine strains.

Paratyphoid

A twenty-one year old student nurse, employed in one of the large Liverpool hospitals, took a holiday in North Africa, returning to this country by air, thence to her home in Wales before returning to duties. On the second day of her work back in the hospital, she felt unwell and reported sick in the evening. She was found to have a raised temperature and was taken off duty. Subsequent investigations showed that she was suffering from paratyphoid, caused by the Salmonella paratyphi "B" phage type 3B, variant 9. She made an uneventful recovery under treatment and since the personal hygiene standards maintained in the hospital were excellent, no infection occurred amongst her contacts. Likewise no contacts in her home area in Wales became infected. One of her young nursing colleagues who accompanied her on holiday returned to Liverpool and thence to Huddersfield, where she likewise was taken ill with paratyphoid "B" from the same organism, clearly acquired at the same time whilst abroad in North Africa. She, too, made an uneventful recovery in isolation hospital, but remained a carrier for a period of four months before she could return to her duties. Likewise none of her contacts became infected.

Typhoid

During the summer holiday, a small party of tourists left Britain and travelled through France and Italy, sharing two cars and camping

in tents at various camping sites and by the wayside. While in Italy, they collected an "au pair" girl, who was returning to Liverpool. The party comprised three families, and their living and sleeping conditions on holiday were overcrowded. Furthermore they had little appreciation of the risks of food-borne infection or practical knowledge of the maintenance of personal hygiene standards under camping conditions, this being their first attempt at car camping in a small group of this sort. They made no restriction on their sources of foodstuff, they had no provision for keeping food cool and frequently kept food under warm conditions from one meal to the next. Their personal washing was of necessity imperfect between their visits to municipal camping sites. For toilets they used a variety of primitive dry disposal systems, if they indeed used any provided system of sanitation at all. Prior to their holiday they had not been immunised with TAB.

A fortnight after returning to Britain, the father of one of the families was taken ill with shivering and diarrhoea. He was treated with antibiotics and continued at work as an engineer in a factory. After a fortnight he was seen in domiciliary consultation by a general physician who admitted him to the open ward of a large general hospital, with a provisional diagnosis of an enterovirus infection. After four days he was discovered to be suffering from typhoid due to Salmonella typhi phage type E1. He was immediately transferred to isolation hospital where he made a slow but uneventful recovery, remaining unfortunately a chronic carrier. All of his contacts returning with him from holiday and his contacts in the general hospital were investigated, but fortunately none was infected by typhoid organisms. He had brought with him from the Continent a series of exotic Continental foods. These were investigated but were found to be free from infection. Before he returned home from isolation hospital, his home contacts were immunised against typhoid by injection of TAB. At the time of writing this report, he still remains well, although excreting the organism being a chronic carrier, but since his work does not involve food handling, he has been able to resume his occupation.

This case illustrates the need for constant vigilance in dealing with patients coming back to Britain from holidays in areas where enteric diseases are endemic. Importation of typhoid and paratyphoid by travellers from these areas is a constant risk and in any case of unexplained pyrexia, the possibility that the patient may be infected by one of these diseases has to be borne in mind.

Coincidentally, the "au pair" girl was a chronic carrier of an unrelated salmonella organism. This was detected as a result of the investigation and dealt with. She is now well and free from infection.

Carriers

All known carriers of ingestion diseases are followed up by the Department until they are free from infection. With care to avoid

ENTEROVIRUS SURVEY, 1961-1967

SUMMARY OF RESULTS

	1961	1962	1963	1964	1965	1966	1967	Total
Number of children from whom specimens were taken	89	182	140	137	141	142	136	967
Number reported on so far	85	180	134	133	139	127	130	928
Number of enteroviruses isolated	16	33	29	29	37	39	28	211
Details of positive cases—								
Adenovirus type 1	—	—	—	—	—	1	—	1
,, ,, 2	1	1	1	—	1	1	1	6
,, ,, 5	—	1	—	1	1	—	—	3
Adenovirus type 2 and Coxsackie virus type A	—	—	—	—	1	—	—	1
Cocksackie virus type A	—	—	5	1	9	5	2	22
,, ,, ,, A2	2	—	—	—	—	—	—	2
,, ,, ,, A4	1	1	—	—	—	—	—	2
,, ,, ,, A6	4	—	—	—	—	—	—	4
,, ,, ,, A8	—	1	—	—	—	—	—	1
,, ,, ,, A9	—	—	—	—	—	—	2	2
,, ,, ,, A10	—	2	—	—	—	—	—	2
,, ,, ,, A16	—	—	—	—	—	—	1	1
,, ,, ,, B1	—	—	—	—	2	—	—	2
,, ,, ,, B2	—	1	2	—	—	—	1	4
,, ,, ,, B3	—	2	2	—	—	—	2	6
,, ,, ,, B4	—	3	—	—	—	3	1	7
,, ,, ,, B5	—	—	1	1	1	—	—	3
,, ,, ,, B6	—	1	—	—	—	—	—	1
Coxsackie virus type A with ECHO virus type 1	—	—	—	—	—	1	—	1
,, ,, ,, ,, ,, ,, ,, ,, 14	—	—	1	—	—	—	—	1
,, ,, ,, ,, ,, ,, ,, ,, 30	—	—	—	1	—	—	—	1
,, ,, ,, ,, ,, unidentified virus	—	—	—	—	1	—	—	1

Details of positive cases—continued

	1961	1962	1963	1964	1965	1966	1967	Total
ECHO virus type 1	—	—	1	4	—	1	1	7
,, ,, ,, 2	4	—	—	—	—	—	—	4
,, ,, ,, 6	—	1	—	—	1	—	—	2
,, ,, ,, 7	—	—	—	3	—	—	—	3
,, ,, ,, 11	—	—	—	1	1	2	—	4
,, ,, ,, 12	—	—	—	—	2	—	—	2
,, ,, ,, 13	—	—	2	—	—	2	—	4
,, ,, ,, 14	—	—	2	—	—	—	—	2
,, ,, ,, 16	—	—	—	—	—	1	—	1
,, ,, ,, 18	1	1	1	1	—	—	—	4
,, ,, ,, 19	—	1	—	1	—	—	—	2
,, ,, ,, 21	—	1	3	—	—	—	—	4
,, ,, ,, 24	—	—	1	—	—	—	—	1
,, ,, ,, 25	—	—	1	1	—	—	—	2
,, ,, ,, 30	—	—	—	2	—	—	—	2
,, ,, ,, 25 with Coxsackie virus type A	—	—	1	—	—	—	—	1
Poliovirus (vaccine virus) type 1 alone	2	1	—	3	—	1	3	10
,, ,, ,, ,, ,, 2 ,, ...	—	2	1	—	4	2	5	14
,, ,, ,, ,, ,, 3 ,, ...	—	5	3	3	7	5	5	28
,, ,, ,, ,, types 1 and 2 together	—	2	—	2	—	—	1	5
,, ,, ,, ,, ,, 1 and 3 together	—	1	—	—	2	1	1	5
,, ,, ,, ,, ,, 1, 2 and 3 together	—	1	—	1	2	—	2	6
,, ,, ,, ,, ,, 2 and 3 together	—	3	—	1	1	—	—	5
Poliovirus, type not identified	—	—	—	1	—	—	—	1
Virus unidentifiable (or not yet identified)	1	1	1	1	1	13	—	18
Totals	16	33	29	29	37	39	28	211

the spread of infection, it is possible for many of these carriers to lead an active life in the community and continue in useful employment, providing this does not involve (*a*) handling food, (*b*) dealing with young children, or (*c*) similar work where spread of the disease might occur. The register of chronic carriers for 1967 contained 29 persons. One carrier of paratyphoid 'B' phage type 2 has been a carrier since 1946. Previously a Liverpool resident, she left the area and this year returned once more to live in Liverpool. She has been closely followed up by the Health Department, both in Liverpool and in Huyton, in which area she was resident in the interval and it is pleasing to be able to report that in spite of the prolonged carrier state, up to the present she has not been a source of infection, or caused outbreaks of this disease. A carrier state as long as this fortunately is rare, most carriers becoming non-infectious within a period of two years. A table showing age and sex distribution of the carriers on the register with the infecting organism and the length of carrier state may be seen in the statistical appendix.

Winter Epidemic Spotting

The normal procedure of using the information obtained from the notification of infectious diseases for following the course of the disease in the community cannot be used for winter epidemics caused by respiratory viruses, generally referred to as "influenza or 'flu". This is because, with the exception of acute primary influenzal pneumonia, influenzal type condition is not statutorily notifiable. Furthermore, when winter epidemics of respiratory disease occur, they occur in such large numbers that the normal procedure for dealing with notifiable infectious disease could not be applied. For this reason special techniques are employed in order to obtain an early warning of an epidemic and to observe its progress.

Useful information is obtained from the Ministry of Social Security based upon their return of the numbers of doctors' certificates issued for sickness claims. A general procedure exists by which during the period from January to March inclusive, if an increase of 30 per cent or more of the previous week is observed, then the Medical Officer of Health is informed. In addition, if for any week there is a rise to 250 per cent of the average for the previous period from April to November, then the Medical Officer of Health is also informed.

In addition to these general arrangements, a special local arrangement exists by which a weekly return of new sickness claims is made and in addition to the total, there are figures for each of the branch offices. These are listed weekly and graphs constructed from which a comparison with the sickness experience of previous years can be made at a glance. Both weekly total and cumulative graphs are made so that the rate of increase or decrease of cases during the epidemic can readily be followed. The advantage of this local arrangement can readily be

seen when it is considered that the mean of the 35 weeks from April to November, 1967, was 4,416 certificates a week, a 250 per cent rise would give a number 11,040, which is extremely high. Another factor which has made the special local arrangements necessary is that on the 1st September, 1967, Church Road, Walton Office closed and the majority of sick returns for this office now go to Bootle. This means that for all intents and purposes postal districts 4, 9 and 10 are not now included in the Liverpool return.

As well as obtaining information from the Ministry of Social Security, it has been the practice from the middle of October onwards each year, when any of the departmental medical officers have occasion to speak to general practitioners or the appropriate hospital doctors about any epidemiological matter, then the opportunity is taken to enquire whether there has been any noticeable increase in conditions which might indicate the onset of a winter epidemic, for example pneumonias, upper respiratory tract conditions, influenza and heart failure. As soon as any suspicion is aroused from these enquiries that a winter epidemic might be on the way, a panel of general practitioners who have volunteered to assist in influenza spotting is contacted. These practitioners are selected to cover all areas of the City and when requested, keep in touch with the Department with information relating to the clinical conditions they see and increases in the daily number of calls.

In order to have an early check on those persons who are taken ill and who do not call a doctor in the first three days before a claim is made to the Ministry of Social Security, the co-operation of various large employers throughout the town has been obtained to return figures of sickness absenteeism from all causes and from apparent influenza.

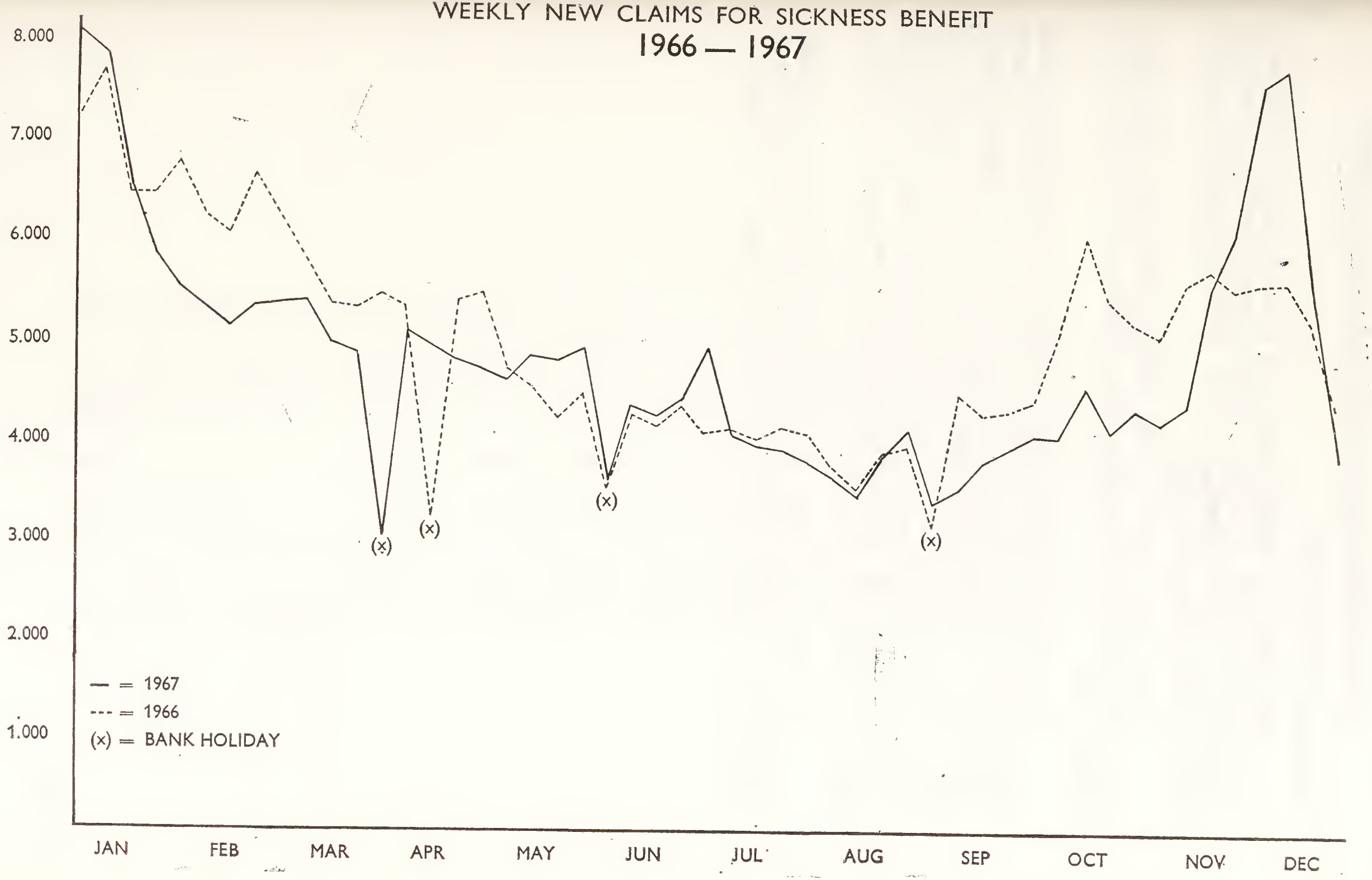
To complete the picture, use is made of returns from the Ambulance Service, District Nursing Service, Home Help Service and also sales of drugs used for respiratory conditions by large dispensing chemists in the City.

The weekly return for the week ending 14th November, when seen graphed against the return for the previous year stimulated enquiries with a panel of "spotters" and with the Ministry of Social Security, who very kindly commenced daily returns in place of weekly. The disease presented itself as an upper respiratory tract infection with little in the way of muscle pains, joint pains or systemic disturbance. Most persons were back at work within two or three weeks and a high proportion carried on with minor infections, continuing to work in spite of their illness. The increase in sickness spread over approximately a month with its highest point at the first week in December. A second increase occurred early in 1968 with a lull between over the Christmas period. Virological investigations of selected patients was carried out

and it was noticed in addition that there was an increase in isolations of Influenza virus "A". It would seem that this was the predominant organism responsible for the increase of sickness but other secondary infectors also played a role.

Parallel with the sickness absence rises, as would be expected there was a rise in death returns from influenzal causes. An unusual feature of the increase seen in the weekly death returns, both from hospital and from general practice was that the influenza deaths were frequently delayed as a result of early antibiotic therapy. The sensitive organisms were dealt with, causing a remission in the early stage of the illness, only to be followed by a later relapse when the patient succumbed, either from insensitive secondary invaders or from cardiac failure. Although this would be a difficult matter to confirm by investigation, the number of reports in keeping with this view has been sufficient to be of significance.

WEEKLY NEW CLAIMS FOR SICKNESS BENEFIT
1966 — 1967



IMMUNISATION AND VACCINATION

Diphtheria Immunisation

The number of persons receiving a primary course of diphtheria immunisation in 1967 was 9,955, which is approximately 10 per cent lower than the 10,850 immunised in 1966. A decrease could be expected with the falling number of births.

During 1967 a total of 1,698 primary courses and 5,102 booster doses were carried out in schools, figures closely similar to those of the previous year.

The number of primary courses carried out in maternity and child welfare clinics was 4,799 : in addition 3,458 were performed by general practitioners. This is a higher proportion carried out in general practice than of recent years. Fewer booster doses were done in maternity and child welfare clinics, the total being 489, but here again the trend was seen, and the number carried out by general practitioners increased from 993 to 1,370 in 1967. This gives an overall total of booster doses of 6,961, a little lower than the figure of 7,385 achieved in 1966.

This trend of increase in interest in immunisation by general practitioners is to some extent a measure of the success of the recent administrative changes facilitating practitioners' work in this field.

TABLE A

PRIMARY DIPHTHERIA IMMUNISATIONS—1957-1967

Where immunised	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967
Maternity and Child Welfare Clinics	4,479	6,861	5,789	13,091	5,479	5,016	5,263	5,710	6,023	5,843	4,799
Schools	3,008	2,316	3,245	3,926	1,332	1,464	1,362	2,732	1,401	1,818	1,698
General Practitioners ...	3,713	5,761	5,102	8,929	6,375	3,523	3,399	3,397	3,405	3,189	3,458
TOTAL	11,200	14,938	14,136	25,946	13,186	10,003	10,024	11,839	10,829	10,850	9,955

TABLE B

Number of children immunised against diphtheria at various age groups

Age at date of immunisation	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	*Estimated immunisation rate
—1	1,910	3,286	3,945	5,826	5,322	4,273	8,214	8,369	1,259	2,572	1,623	3,340	3,312	2,881	2,851	
1–	2,396	1,156	2,176	1,786	2,458	2,686	1,193	4,206	4,084	4,962	4,255	2,117	4,462	4,352	4,030	Total under 5 years of age 31,092, being 43·1% of the population of this age group.
2–	394	380	177	290	399	436	387	342	1,209	676	692	740	317	720	502	
3–	118	114	109	45	123	135	120	212	489	153	214	409	445	194	289	
4–	55	53	52	43	30	64	57	100	858	81	102	225	874	366	102	
5–	1,527	1,485	1,230	781	975	538	1,016	2,692	1,245	704	384	1,230	425	546	429	Total 5-9 years of age 61,248, being 76·4% of the population of this age group.
6–	812	790	654	415	518	571	270	1,435	663	286	289	434	130	1,073	1 088	
7–	718	699	579	368	459	506	478	633	585	142	178	262	23	290	260	
8–	580	565	468	297	370	409	387	1,020	236	78	61	141	61	64	70	
9–	481	466	386	245	307	339	320	844	388	54	50	122	45	53	46	
10–	87	155	57	55	71	58	81	1,669	468	52	51	120	90	17	44	Total 10-14 years of age 53,772, being 68·0% of the population of this age group.
11–	74	128	47	46	60	49	68	1,469	412	51	—	30	122	25	39	
12–	35	60	22	22	28	23	33	681	191	29	68	59	32	8	20	
13–	34	58	21	20	26	21	30	662	186	29	—	29	61	1	18	
14–	32	55	20	19	25	20	28	658	184	—	—	—	61	1	7	
15–	13	20	10	17	—	—	—	—	4	—	—	—	—	4	6	
Total	11,176	10,625	10,129	10,319	11,200	14,938	14,145	25,966	13,186	10,003	10,024	11,839	10,829	10,854	9,955	

* The percentages given in the last column are based on the total live births for the five related years in each age group. It has not been possible to correct for the trend of reduction in the child population which has taken place almost continuously over the fifteen years covered by this table.

Population under 15, June, 1957 (Registrar General's estimate) ... 200,000 (1956 figure not available).
Population under 15, June, 1967 (Registrar General's estimate) ... 178,000
Total live births 1953-1967 inclusive (15-year period) 231,392

No correction has been made for deaths, or for children who have left the city since being immunised. The corrected immunisation rate would therefore be higher than that stated in the table. The figures given are intended only to be a reasonable approximation.

Vaccination Clinic

Poliomyelitis immunisation

Infectious disease enqui

TABLE C

DIPHTHERIA IMMUNISATION—1967

	Where Immunised	Year of Birth			
		1963-67 (0—4 yrs.)	1959-62 (5—8 yrs.)	Others under 16 (9—15 yrs.)	Total (0—15 yrs.)
Primary Course	Maternity and Child Welfare Clinics ...	4,615	163	21	4,799
	General Practitioners	3,227	79	152	3,458
	Schools	34	1,605	59	1,698
	Total	7,876	1,847	232	9,955
Booster Doses	Maternity and Child Welfare Clinics ...	90	383	16	489
	General Practitioners	540	586	244	1,370
	Schools	69	4,897	136	5,102
	Total	699	5,866	396	6,961

Whooping Cough Immunisation

The number of primary courses of whooping cough immunisation in 1967 was 8,017 compared with 1966 when 8,807 were completed. The same trend as was seen for diphtheria immunisation is evident here.

The level of booster doses remained fairly constant, being 1,449 as compared with 1,144 in 1966.

TABLE D

WHOOPING COUGH IMMUNISATION—1967

	Where Immunised	Year of Birth			
		1963-67 (0—4 yrs.)	1959-62 (5—8 yrs.)	Others under 16 (9—15 yrs.)	Total (0—15 yrs.)
Primary Course	Maternity and Child Welfare Clinics ...	4,547	72	3	4,622
	General Practitioners	3,172	131	92	3,395
	Total	7,719	203	95	8,017
Booster Doses	Maternity and Child Welfare Clinics ...	58	214	8	280
	General Practitioners	499	582	88	1,169
	Total	557	796	96	1,449

Tetanus Immunisation

The level of tentanus immunisation in 1967 was approximately 10 per cent less than in 1966. A total of 9,995 primary courses were completed compared with 10,860 in the previous year. This would be expected as primary tetanus immunisation is in the main carried out with triple antigen. In addition, 7,005 booster doses were carried out compared with 7,378 the previous year, of these, 5,102 were administered in schools.

TABLE E

TETANUS IMMUNISATION—1967

	Where Immunised	Year of Birth			
		1963-67 (0—4 yrs.)	1959-62 (5—8 yrs.)	Others under 16 (8—15 yrs.)	Total (0—15 yrs.)
Primary Course	Maternity and Child Welfare Clinics ...	4,624	148	29	4,801
	General Practitioners	3,217	94	187	3,498
	Schools	34	1,603	59	1,696
	Total	7,875	1,845	275	9,995
Booster Doses	Maternity and Child Welfare Clinics ...	90	400	18	508
	General Practitioners	526	704	165	1,395
	Schools	4	4,827	271	5,102
	Total	620	5,931	454	7,005

TABLE F

PRIMARY COURSES OF ANTIGEN

Diphtheria/tetanus/whooping cough and poliomyelitis, combined antigen ...	14
Diphtheria/tetanus and whooping cough, combined antigen	7,999
Diphtheria and tetanus, combined antigen	1,927
Tetanus antigen	55

Smallpox Vaccination

Infant vaccination has remained low in 1967, only 4,601 primary vaccinations against smallpox were carried out. The figure for 1966 was 5,915.

The number of vaccinations for the purposes of persons travelling abroad has also decreased from 21,985 in 1966 to 10,509 in 1967.

TABLE G

SMALLPOX VACCINATIONS—1963-1967

	1963	1964	1965	1966	1967
Births	15,775	15,625	14,553	13,557	12,583
Total Primary Vaccination	1,454	3,722	4,691	5,275	4,312
Total Re-vaccinations	341	349	343	640	289
Total	1,795	4,071	5,034	5,915	4,601
Total Vaccinated at Clinics	648	1,962	2,621	3,295	2,195
Total Vaccinated by General Practitioners	1,147	2,109	2,413	2,620	2,406
Total	1,795	4,071	5,034	5,915	4,601

Poliomyelitis Vaccination

The number of primary courses of poliomyelitis vaccination has dropped from 14,088 in 1966 to 11,088 and booster doses from 9,673 to 8,170. This is very much a reflection of the fall in the number of births.

TABLE H

POLIOMYELITIS IMMUNISATION—1967

Completed Primary Courses

Where Immunised	Year of Birth						Others under 16	Others over 16	Total
	1967	1966	1965	1964	1963	1959-62			
Maternity and Child Welfare Clinics ...	1,470	3,056	621	316	260	288	26	95	6,132
General Practitioners	806	1,466	207	99	37	120	105	91	2,931
Schools	—	—	—	8	33	1,885	99	—	2,025
Total ...	2,276	4,522	828	423	330	2,293	230	186	11,088

Reinforcing Doses

Maternity and Child Welfare Clinics ...	1	3	22	26	73	389	27	68	609
General Practitioners	22	110	155	73	49	426	344	194	1,373
Schools	—	—	—	6	74	5,890	218	—	6,188
Total ...	23	113	177	105	196	6,705	589	262	8,170

TABLE J

Number of children immunised against poliomyelitis at various age groups

Age at date of immunisation	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	* Estimated immunisation rate
−1	—	45	198 197	458	376	2,804	464	416 415	2,662	2,868	2,457	2,276	
1 −	—	1,003	2,977	1,895 1,894	3,027	3,752	3,454	3,543	2,681 2,681	5,725	5,060	4,522	Total under 5 years of age 32,982 being 45·7% of the population of this age group.
2 −	144	1,221	2,922	2,848	756 756	3,364	851	910	2,114	945 944	1,419	828	
3 −	120 120	1,434	2,678	2,477	889	1,591 1,591	775	154	1,031	1,654	535 535	423	
4 −	272	722 721	2,594	2,054	683	4,072	227 226	62	321	1,106	1,140	165 165	
5 −	410	1446	1,214 1,213	1,934	697	3,761	322	20 20	173	895	887	90	
6 −	372	1,610	2,450	981 980	542	3,724	233	22	21 21	144	800	263	Total 5-9 years of age 46,370 being 54·4% of the population of this age group.
7 −	415	2,855	2,483	1,789	265 264	3,622	155	16	26	44 44	193	1,473	
8 −	508	3,037	2,197	1,747	462	1,699 1,699	210	6	15	107	77 77	467	
9 −	544	3,098	2,288	1,606	486	3,371	132 131	8	8	99	128	56 56	
10 −	—	3,611	2,399	1,336	479	3,170	134	4 3	6	74	67	38	
11 −	—	—	3,897	1,582	375	3,177	123	9	4 3	55	81	33	Total 10-14 years of age 54,141 being 68·5% of the population of this age group.
12 −	—	—	7,411	1,253	392	3,172	114	6	6	29 29	25	9	
13 −	—	—	5,884	1,029	396	3,327	80	11	4	49	8 7	8	
14 −	—	—	5,923	852	286	2,824	68	7	1	26	21	9 8	
15 −	—	—	4,734	1,551	14,582	355,519	6,197	409	429	2,077	1,058	199	
	2,905	20,803	53,659	28,266	25,713	406,239	13,896	6,041	12,207	16,914	14,575	11,088	

This table does not cover the same period as Table B (diphtheria immunisation) as immunisation against poliomyelitis was not available in the earlier years of Table B.

* The percentages given in the last column are based on the total live births for the five related years in each age group. It has not been possible to correct for the trend of reduction in the child population which has taken place almost continuously over the eleven years covered by this table.

Population under 15, June, 1957 (Registrar General's estimate) ... 200,000 (1956 figure not available).
Population under 15, June, 1967 (Registrar General's estimate) ... 178,000
Total live births 1953-1967 inclusive (15-year period) 231,322

No correction has been made for deaths, or for children who have left the city since being immunised. The corrected immunisation rate would therefore be higher than that stated in the table. The figures given are intended to be only a reasonable approximation.

Yellow Fever Clinic

A total of 10,509 persons received vaccination and immunisation for international travel at the clinic which is held every afternoon for this purpose. This is lower than the number who attended in 1966 due to the fact that smallpox vaccination certificates were not required in European countries in 1967 from persons proceeding direct from the United Kingdom.

Of the total attending, 2,957 were immunised against yellow fever, 5,280 were vaccinated against smallpox, 985 received a course of T.A.B. and 1,287 were immunised against cholera.

TABLE K

VACCINATIONS FOR INTERNATIONAL TRAVEL—1967

Month	Yellow Fever	Smallpox—Number of persons vaccinated	T.A.B.—Number of full courses	Cholera—Number of full courses	Total
January ...	239	465	67	119	890
February ...	266	451	56	88	861
March ...	296	598	55	79	1,028
April ...	191	562	48	79	880
May	251	646	146	90	1,133
June... ...	247	560	130	107	1,044
July... ...	258	481	109	113	961
August ...	315	357	97	92	861
September ...	216	359	124	103	802
October ...	234	304	74	237	849
November ...	227	288	51	123	689
December ...	217	209	28	57	511
Totals ...	2,957	5,280	985	1,287	10,509

ANTHRAX IMMUNISATION

Anthrax immunisation is offered by the Health Department to persons at special risk, these being those working in such establishments as tanneries, glue, gelatine and bonemeal factories and woollen mills, who are regularly handling such materials as wool, camel hair, horse hair, hides and hoof and horn meal, particularly those imported from India, Pakistan, the Middle East, China, Africa, Asia, Central and South America.

TABLE L

ANTHRAX IMMUNISATIONS

	1st Injection	Booster
1966		
January/March	3	8
April/June	1	7
July/September	8	4
October/December	9	10
Total	21	29
1967		
January/March	7	18
April/June	9	21
July/September	7	22
October/December	—	15
Total	23	76

CONTROL OF RADIATION HAZARDS

Registered Users under Radioactive Substances Act, 1960

There was no increase in the number of establishments on the Register of Users during 1967. One previous registered user discontinued his registration, reverting to methods not requiring radioactive substances.

Use of Radioactive Sources in Schools, Establishments of Further Education and Training Colleges

Three further schools are now using radioactive materials making a total of 39.

The faulty X-ray crystallography unit which was reported previously had to be taken out of use and three new units installed which are of more modern design and of acceptable safety.

Tables listing all sources at present held in the City, excluding hospitals and the University, are given below :—

RADIOACTIVE SEALED SOURCES—EDUCATIONAL ESTABLISHMENTS

Nature of Source	Size of Source	Number of Sources
Americium 241	0·125 microcuries	25
Cobalt 60	5 ,,	32
Plutonium 239	0·1 ,,	15
Radium 226	5 ,,	29
Strontium 90	0·125 ,,	26
	9 ,,	17
	1 ,,	14

RADIOACTIVE SEALED SOURCES—INDUSTRIAL ESTABLISHMENTS

Nature of Source	Size of Source	Number of Sources
Americium 241	1·2 curies	1
Carbon 14	1 microcurie	1
	0·5 ,,	1
	0·75 ,,	1
Caesium 137	0·5 millicuries	1
Thallium 204	30 ,,	1
	24 ,,	1
Strontium 90	469 ,,	1
Iridium 192	500 ,,	1
Thulium 170	300 ,,	1

Survey of Dental X-Ray Appliances in School Dental Clinics

Following the survey of X-ray sets used in the School Dental Service, carried out by the Radiological Protection Service in 1966, work was commenced in an attempt to improve on the colimation. It has been found possible to reduce the standard diameter beam at a film distance of 7 to 8 inches to below 2·5 inches. Although it would seem theoretically possible and desirable to reduce the field diameter to 1·75 inches, in practice it is found that this would result in the need to take extra films due to the increased difficulty in keeping the narrow beam of X-rays accurately on the whole part for which a radiograph is required. It has been found, however, that a compromise reduction in beam diameter to 2 inches produces a worthwhile reduction in overall dosage without the risk of too many spoilt films. It is hoped to be able to produce a series of colimators for general use with varying beam diameters so that the minimum diameter of beam can be achieved commensurate with the requirements of the area being radiographed. As a rough estimate, an overall reduction of the total dose rate in dental radiography in school clinics of the order of 40 per cent can reasonably be expected.

MEDICAL CARE OF IMMIGRANTS

Medical Arrangements for Long-Stay Immigrants

In January, 1965, the Ministry of Health introduced a scheme under which medical inspectors at ports endeavour to obtain destination addresses from those immigrants who are referred to them. They then forward these addresses to the Medical Officers of Health of the areas concerned, who arrange for the immigrants to be visited and given general information about the health services, and persuaded to register themselves and their dependants with general medical practitioners with a view particularly to chest X-ray where this is appropriate.

On receipt of each advice note of the arrival of an immigrant in Liverpool arrangements are made for a health visitor to call at the address given. Quarterly returns of figures relating to the visits are made to the Ministry of Health.

Although the tracing of immigrants is laborious and time-consuming, there has been little difficulty in obtaining co-operation when first anxieties have been dispelled. A constant problem remains of incorrect addresses being given; temporary accommodation being given as a permanent place of residence. Whenever possible, when this latter occurs, the information is passed on to the appropriate Medical Officer of Health of the area to which the immigrant has moved.

A summary of the results for the year is given below:—

Advice notes received relating to 281 persons.

Successful first visits made relating to 220 persons. There were also 11 successful first visits relating to advice notes received in 1966.

Not Liverpool addresses: 19 persons.

Not traced during the period: 42 persons.

One notification of pulmonary tuberculosis was received relating to a newly-arrived immigrant who had a chest X-ray on the advice of a health visitor.

TUBERCULOSIS

Statistics

The number of new cases found was two less than the previous year; a total of 263 cases was discovered consisting of 234 pulmonary and 29 non-pulmonary cases. These figures give an incidence rate of 0·33 per 1,000 for cases of pulmonary tuberculosis and 0·04 per 1,000 for cases of non-pulmonary tuberculosis.

During the year 443 cases were removed from the Register, consisting of 411 pulmonary and 32 non-pulmonary. These included those cases who had recovered. The number of cases on the Register at the beginning of the year was 3,510 excluding eleven cases where diagnosis had not been completed. Of these, 3,234 were pulmonary and 276 non-pulmonary. This gave a prevalence rate per 1,000 population of 4·59 pulmonary and 0·39 non-pulmonary with an overall tuberculosis prevalence rate of 4·98 per 1,000 at mid-year.

The total number of cases remaining at the end of the year was 3,057, comprising 2,788 pulmonary and 269 non-pulmonary, excluding a total of 17 cases where diagnosis had not been completed. Thus, it may be seen that the overall reservoir of cases is continuing to decrease.

The number of new cases found as the result of illness was 206, which is seven more than the previous year. The number of new cases found by examination of apparently healthy persons was 58. Both the total number and the proportion of cases detected in apparently healthy persons have shown a marked decrease from the previous year. Details are given in the tables in the statistical section.

Of the new cases of pulmonary tuberculosis 171 were male and 63 female, being 73·1 per cent of the total male, and 26·9 per cent of the total, female. Details of the age and sex distribution are also given in the statistical section. These indicate that the disease is predominant still in the adult male working population.

The total of 49 tuberculosis deaths in 1967 comprised 44 deaths from pulmonary tuberculosis, and five from non-pulmonary tuberculosis. These represent rate 0·062 pulmonary per 1,000 population and 0·007 non-pulmonary per 1,000 population making an overall rate of 0·069 for all forms.

Tuberculosis After-care and Prevention

The full complement of Chest Disease Visitors is sixteen. At the beginning of the year there were only fifteen distributed between the four clinic areas. One retired, then two new visitors were appointed, restoring the full number.

Increasing attention is being paid to other pulmonary conditions, such as bronchitis, bronchiectasis, carcinoma of the lung and conditions following chest surgery.

Use of Section 172 of the Public Health Act 1936

As in previous years, Section 172 of the Public Health Act, 1936, has not been implemented, but in its existence, lending persuasion to cases who might otherwise refuse hospital treatment, it has been of value.

The essential task in persuading the unwilling to co-operate is the diagnosis of the reason for refusal. Often this is unfounded fear which when relieved by patient explanation, supportive social aid and a gentle compassionate approach, does more to achieve co-operation than legal measures. Compulsion can only be used initially in sputum positive cases and has no force after the early stages of the disease. The co-operation of the patient throughout a long illness and in the follow-up period is essential to avoid recurrence and spread to others. Threats of legal action can in some cases spoil the relationship between patient and doctor or visitor and make subsequent co-operation less reliable. Nevertheless there is still a place for its limited use.

Despite the use of chemotherapy, improved surgical techniques and an overall improvement in nutritional and environmental standards, there still persists a pool of tuberculous infection. Inmates of common lodging-houses, because of their gregarious mode of life, have long been recognised as a major part of this reservoir. The typical person using the facilities offered by lodging-houses is a middle-aged or elderly vagrant. He is malnourished, physically deteriorated and neglected. He pays scant attention to the ordinary measures of personal hygiene necessary to maintain health. He "lives rough" outdoors during the summer months and with the onset of cold weather seeks admission to a common lodging-house where he enjoys the companionship of his fellows whose attitudes to life are similar to his own. He is often described as a "colourful character" but this euphemism cannot conceal the fact that the lodging-house user is a person who lives a drab, unhealthy life and consequently falls prey to nutritional deficiency and tuberculosis. When such a person is found to be infected, and is first approached with advice on treatment he is often unco-operative and frequently takes flight to an unknown address rather than accept treatment or admission to hospital. Similar difficulties are experienced with his contacts who are of similar outlook.

The problems outlined above are well illustrated by an incident which took place during the year. Following notification of a case of pulmonary tuberculosis at a common lodging-house in the City, arrangements were made for a unit of the Mass Radiography Service to visit

the premises. Out of a total of 28 persons X-rayed, ten showed abnormalities requiring further assessment on standard size film. Despite prompt follow-up by the chest diseases visitor, seven of the ten persons referred to above had moved to unknown addresses before arrangements could be made to have them medically examined at the Chest Clinic. Of the remaining three persons, two were found to have normal X-rays whilst the third person was found to have advanced bilateral pulmonary tuberculosis. He was admitted to hospital where he died some weeks later.

B.C.G. Vaccination

During the year B.C.G. vaccination of new-born babies continued in both the clinics and maternity wards of the Sefton General, Walton, Mill Road and Liverpool Maternity Hospitals. The total number of babies vaccinated throughout all these units in the City was 434.

In addition 51 University students were given B.C.G. vaccination at Walton Hospital.

B.C.G. Vaccination of School Children

Vaccination was offered to 10,838 school leavers and 9,382 parents signed the consent form. The number Heaf tested in schools was 9,213. The number of positive Heaf tests was 1,206 (13·09 per cent). This number includes 493 (5·35 per cent of total tested) who had previously had B.C.G. or a history of tuberculosis. The number of children given B.C.G. vaccination was 7,294 being 79·2 per cent of the total number tested and 67·3 per cent of the number to whom vaccination was offered. The corresponding percentages in 1966 were 83·9 and 70·1, respectively.

Summary

(1)	Number of school children offered B.C.G. vaccination ...	10,838
(2)	Number of acceptors...	9,382
(3)	Number Heaf tested	9,213
(4)	Number of positive Heaf tests.	1,206
(5)	Number of children vaccinated with B.C.G.	7,294

Mass Radiography

Mr. C. C. Warmer, Organising Secretary, Liverpool Regional Hospital Board, writes:—

The Liverpool Regional Hospital Board administers the Mass Radiography Service. A static unit operates at 9a, Hood Street, and two mobile units cover South West Lancashire and Wirral in addition to industry in the City of Liverpool.

The static unit at Hood Street examines individuals from three main sources:—

PULMONARY TUBERCULOSIS PREVALENCE RATE PER 1,000 OF POPULATION, 1958—1967

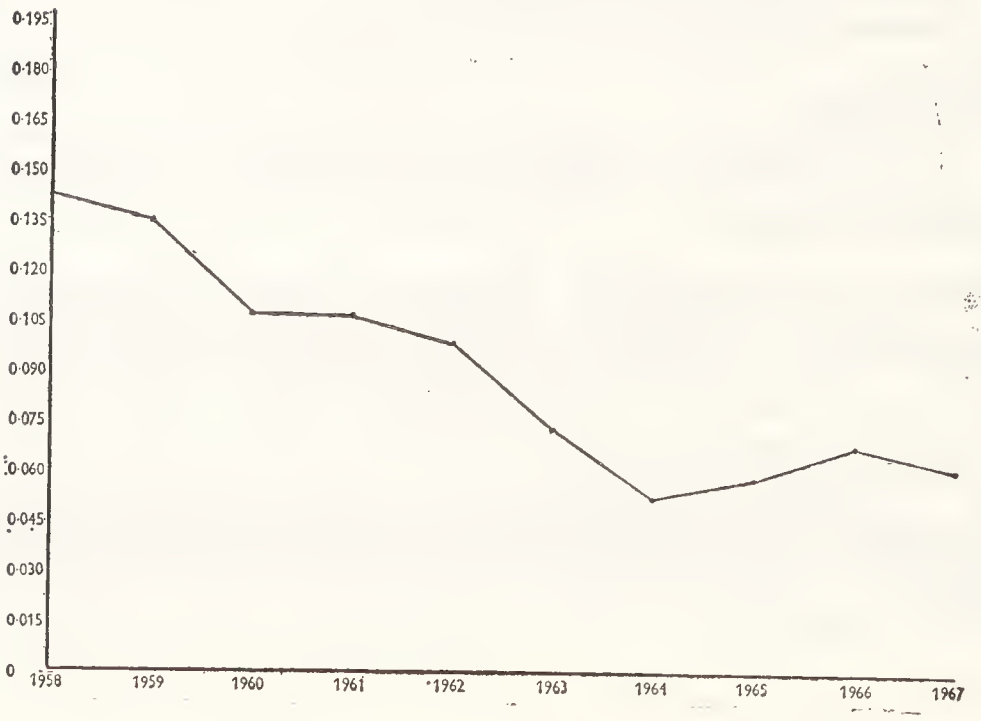
LIVERPOOL

PULMONARY TUBERCULOSIS INCIDENCE RATE PER 1,000 OF POPULATION 1958 TO 1967 INCLUSIVE

LIVERPOOL

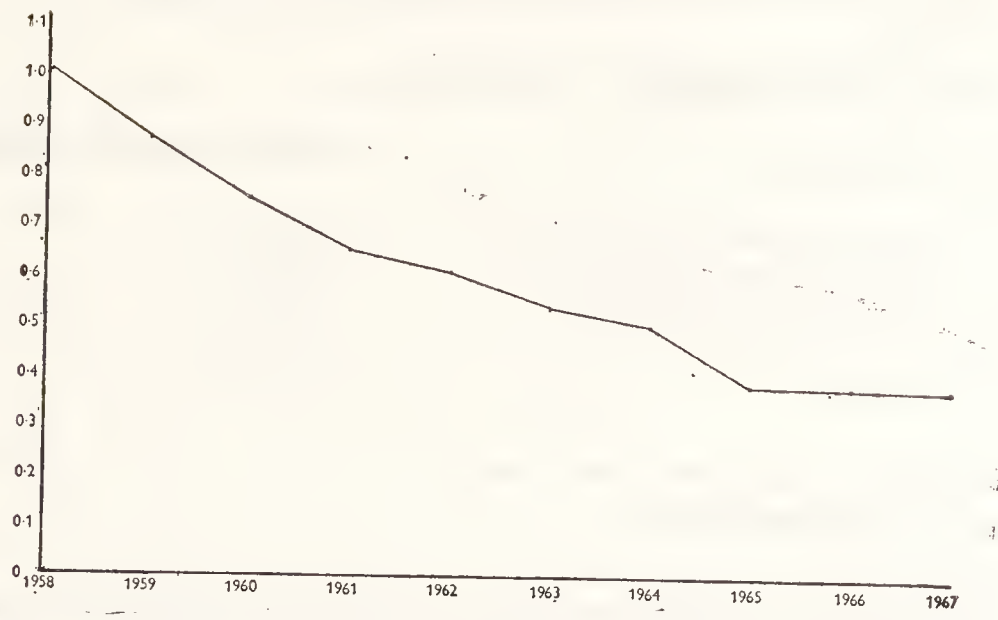
PULMONARY TUBERCULOSIS MORTALITY RATE PER 1,000 OF POPULATION 1958 TO 1967 INCLUSIVE

LIVERPOOL



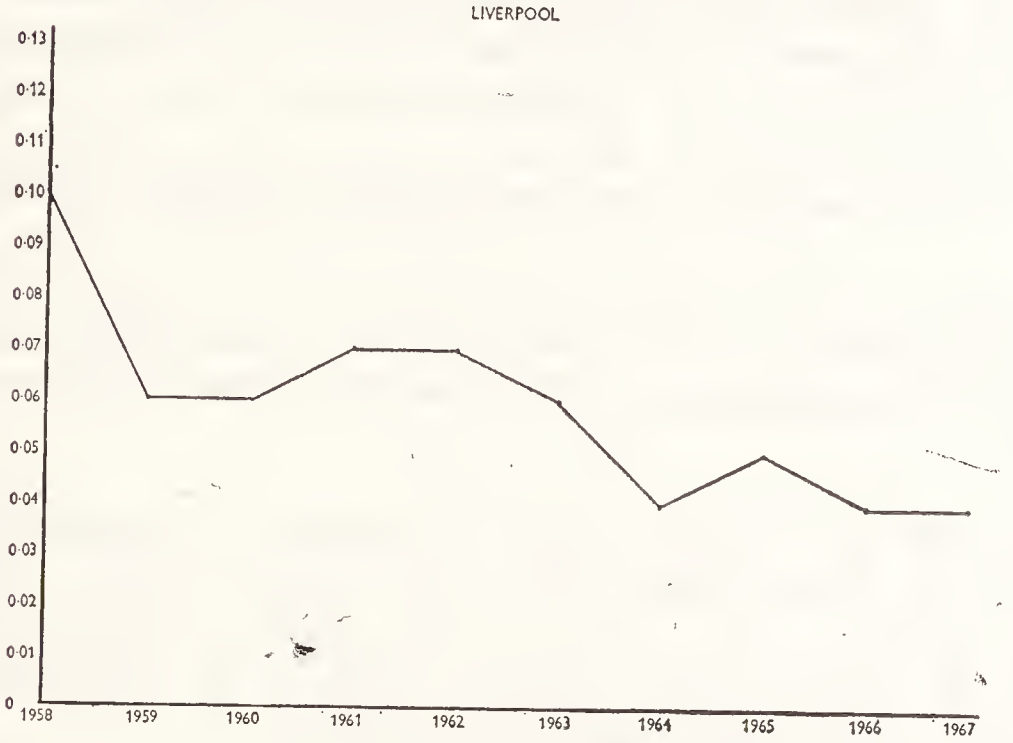
NON-PULMONARY TUBERCULOSIS PREVALENCE RATE PER 1,000 OF POPULATION, 1958-1967

LIVERPOOL.



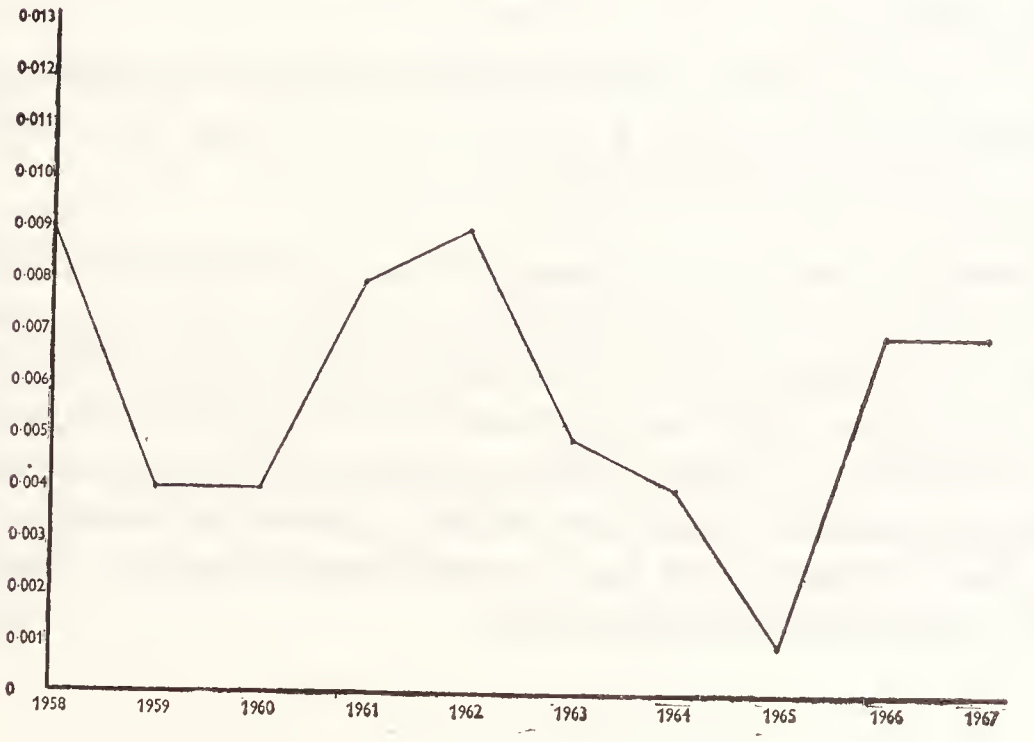
NON-PULMONARY TUBERCULOSIS INCIDENCE RATE PER 1,000 OF POPULATION 1958 TO 1967 INCLUSIVE

LIVERPOOL



NON-PULMONARY TUBERCULOSIS MORTALITY RATE PER 1,000 OF POPULATION, 1958 TO 1967

LIVERPOOL



(i) Cases referred by general practitioners, mainly within the City.

(ii) Local business firms, shops and offices.

(iii) General public volunteers.

Numbers X-rayed by the three units in 1967 were as follows:—

No. 1 Unit (Hood Street)	...	32,184
No. 2 Unit (Lancashire)	...	47,588
No. 3 Unit (Cheshire)	...	39,456
		119,228

Of the 32,184 examinations made by No. 1 Unit, 8,039 were referred by general practitioners.

All prospective employees of the City Nursing Service are X-rayed by the Hood Street Unit before their engagement, as are candidates for employment in the Education Service, and recruits to the City Police Force. The entry medical examination of Corporation employees and superannuation medical examinations include a chest X-ray, and these are carried out by the Mass Radiography Service.

The M.M.R. Service co-operates closely with the Health Department by arranging visits of the mobile units to factories and other premises in the City whenever an active case of pulmonary tuberculosis is discovered.

During 1967, 40 cases of active pulmonary tuberculosis were discovered by the Hood Street unit; of these, 32 were Liverpool residents. In addition, eleven active cases resident in the City were discovered by the mobile units making a total of 43 Liverpool cases brought to light by the Mass Radiography Service.

Tuberculosis Welfare

During 1967, 33 cases have been the subject of reports to the Ministry of Social Security with a view to determining their eligibility for allowances based on medical needs.

The Ministry constantly reviews persons in receipt of allowances and requests confirmation that individuals are still receiving treatment or are under the supervision of the Chest Physician. The Health Department co-operates fully in this matter and supplies the necessary information. In addition constant liaison is maintained with the Ministry of Labour Rehabilitation Centre in order to assist in suitable cases. During 1967, four patients have had occupational therapy at home and two attended occupational therapy units.

Work of the Chest Clinics

An analysis of the work done during 1967 at the four Chest Clinics is given in the statistical section. The Chest Physicians have kindly contributed the following reports :—

Dr. F. E. Crawley, Consultant Chest Physician of the South Liverpool Chest Clinic, writes :—

"This year, as in the past few years, there has been an approximate 10 per cent fall in the numbers of patients on the Clinic Tuberculosis Register. The new patients have only totalled four fewer than last year and, although 35 registered patients died during the year, only five deaths were due to tuberculous infection.

Total attendances for all purposes at the clinic were higher than in 1966. Overall admissions to sanatoria have been greater than last year and there is a hard core of patients requiring re-admission because of problems of treatment or of temporary incapacity due to complications associated with healed or healing but damaged lungs. On the whole the duration of sanatorium stay has been shorter this year.

There are still a few patients who will not co-operate in whom nothing short of legal enforcement has any effect."

Dr. W. D. Gray, from the North Chest Clinic, writes :—

"During 1967 notifications of new tuberculosis cases fell from 67 to 61 in the North Clinic area, but the number of deaths due to tuberculosis rose from 24 to 36 and fell from 34 to eighteen where tuberculous patients died from other causes. The number of patients removed from the register as recovered was 154, and the total number on the register has fallen from 1,121 to 893. Of 516 new contacts examined, only two were found to have active pulmonary tuberculosis. Total attendance at the clinic was 5,371, a fall of about 400 since 1966, and 162 contacts were given B.C.G. compared with 331 in the year before. There was also a reduction in tuberculin tests from 614 to 393, roughly about half of the new contacts examined.

This year the fall in new notifications resumes a trend which was reversed in 1966 in this area, and it is to be hoped that the figures for 1968 will be equally encouraging."

Dr. S. Kalinsky of the Central Chest Clinic, states :—

"The number of new cases referred during 1967 was 30 with 200 follow-ups and 218 new contacts. Six patients were notified during the year as active pulmonary tuberculosis. B.C.G. vaccinations numbered 103 at the Central Chest Clinic and 75 at the Liverpool Maternity Hospital.

I think the only comment I would like to make would be that B.C.G. vaccination be carried out by the Senior Registrar at the Maternity Hospital, as is done at Walton Hospital, Mill Road and Broadgreen. Although the Maternity Hospital is quite near at present, there is the possibility of the Central Chest Clinic moving to quite a distance, and if there are only one or two vaccinations to be done this does mean opening a new phial each time."

Dr. L. H. Harris, of the East Chest Clinic, states :—

"The tuberculosis work at this clinic has fallen very considerably. There were only 37 new cases notified in 1967. More than two-thirds of the work of the clinic is now concerned with non-tuberculous conditions.

Tuberculin testing has fallen about 50 per cent but the number of B.C.G. vaccinations remains much the same or even higher than before, which implies that most of those tested were tuberculin negative.

The year has also been marked by the retirement of Dr. Osborne Hughes, after many years of devoted service."

EMERGENCY CARE OF THE ELDERLY

Removal to Suitable Premises of Persons in Need of Care and Attention

These cases are assessed with great care, and having regard to the medical, social and environmental aspects. Every effort is made to provide adequate support in the home, whatever the need, in order to maintain an independent existence for these elderly persons as long as possible. Quite often efforts are successful. During the course of the past year the department was asked to assess a total of 40 cases. Compulsory removal under the provisions of the National Assistance Act 1948, Sec. 47 and Amendment Act 1951 was invoked only eight times.

An example of a successful case may be quoted here. An elderly lady, living on her own, without physical illness apart from frailty, has been adequately supported at her home for many months by frequent visits from her family doctor. There were serious sanitary defects in the house as well as general disrepair, and conditions were bound to deteriorate. All orders to remedy the defects were refused initially, but eventually, after a full discussion at which the relatives were present, the old lady agreed to the repairs taking place. Her living conditions were markedly improved when the work had been completed. It was clear that much of her original resistance to being helped in this way sprang from the harmful effects of loneliness. It is often found that common cases such as this do quite well once confidence has been obtained and the vicious circle of isolation broken.

A certain number, however, because of illness or general senility, can no longer be cared for at home, requiring hospital or residential accommodation for recovery or the maintenance of reasonable health. Whenever this occurs, the medical and welfare problems are fully discussed with the person, and the offer of suitable treatment away from the home is made. Patient attempts are made to persuade the person to accept this treatment on a voluntary basis. Where the offer is refused and the need urgent, compulsory removal is arranged under the National Assistance Act.

VENEREAL DISEASE

Incidence of Gonorrhoea

There was a slight increase in incidence of gonorrhoea on the 1966 level, affecting both men and women, as may be seen from the table below. This represents a continuation of the trend of recent years, of a small but steady annual increase.

Re-infection in males occurred in 167 instances—

1,303 infections, 1,136 individuals.

Re-infection in females occurred in 62 instances—

488 infections, 426 individuals.

Age in years	1946		1961		1962		1963		1964		1965		1966		1967	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Under 15	—	4	—	5	—	1	—	2	—	—	—	—	—	1	1	1
15–17	21	17	24	27	42	25	37	31	49	43	23	21	26	45	27	56
18–20	262	79	180	94	184	86	204	85	228	129	143	94	164	126	176	120
21–25	978	141	416	138	429	106	427	122	541	140	418	149	400	157	392	148
26–30	870	88	295	56	294	36	302	57	377	66	281	59	334	74	383	109
31–35	513	53	155	21	148	20	149	23	170	29	130	19	157	28	123	24
36–40	259	29	102	16	79	13	85	10	91	8	70	10	90	21	89	22
41–45	135	5	52	3	44	6	49	3	70	2	51	7	48	8	64	3
46 and over	74	6	49	4	42	4	64	3	43	5	35	6	59	3	48	5
Total	3,112	422	1,273	364	1,262	297	1,317	336	1,569	422	1,151	365	1,278	463	1,303	488

Incidence of Syphilis

Statistics over the years are as follows:—

Age in years	1946		1961		1962		1963		1964		1965		1966		1967	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Under 15	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
15–17	9	15	4	—	1	—	2	—	2	1	2	—	1	—	4	4
18–20	40	71	5	—	6	1	9	3	18	5	12	3	9	5	12	12
21–25	177	111	10	2	19	3	24	2	36	6	42	14	20	6	18	14
26–30	149	57	8	—	11	3	14	4	20	3	23	2	15	3	20	3
31–35	136	41	10	1	9	—	9	2	9	—	14	1	10	4	12	6
36–40	73	23	2	1	4	1	5	—	3	1	7	—	7	3	11	4
41–45	32	5	2	—	4	—	—	1	5	1	5	1	5	3	16	4
46 and over	39	6	—	—	4	2	3	1	3	—	8	—	7	—	15	4
Total	655	331	41	4	58	10	66	13	96	17	113	21	74	24	108	51
Total M & F	986		45		68		79		113		134		98		159	

The incidence of syphilis was much higher than the year before when the figures were very low.

A substantial part of the apparent difference between 1966 and 1967 results from a group of cases occurring early in January, which, but for a matter of being reported a few days later, would have been included in the 1966 total.

Nevertheless there is some evidence that similarly to the experience in gonorrhoea there has been a small increase.

Re-infection of syphilis occurred in one instance in a male, and one in a female.

Contact Tracing

The following table indicates results obtained:—

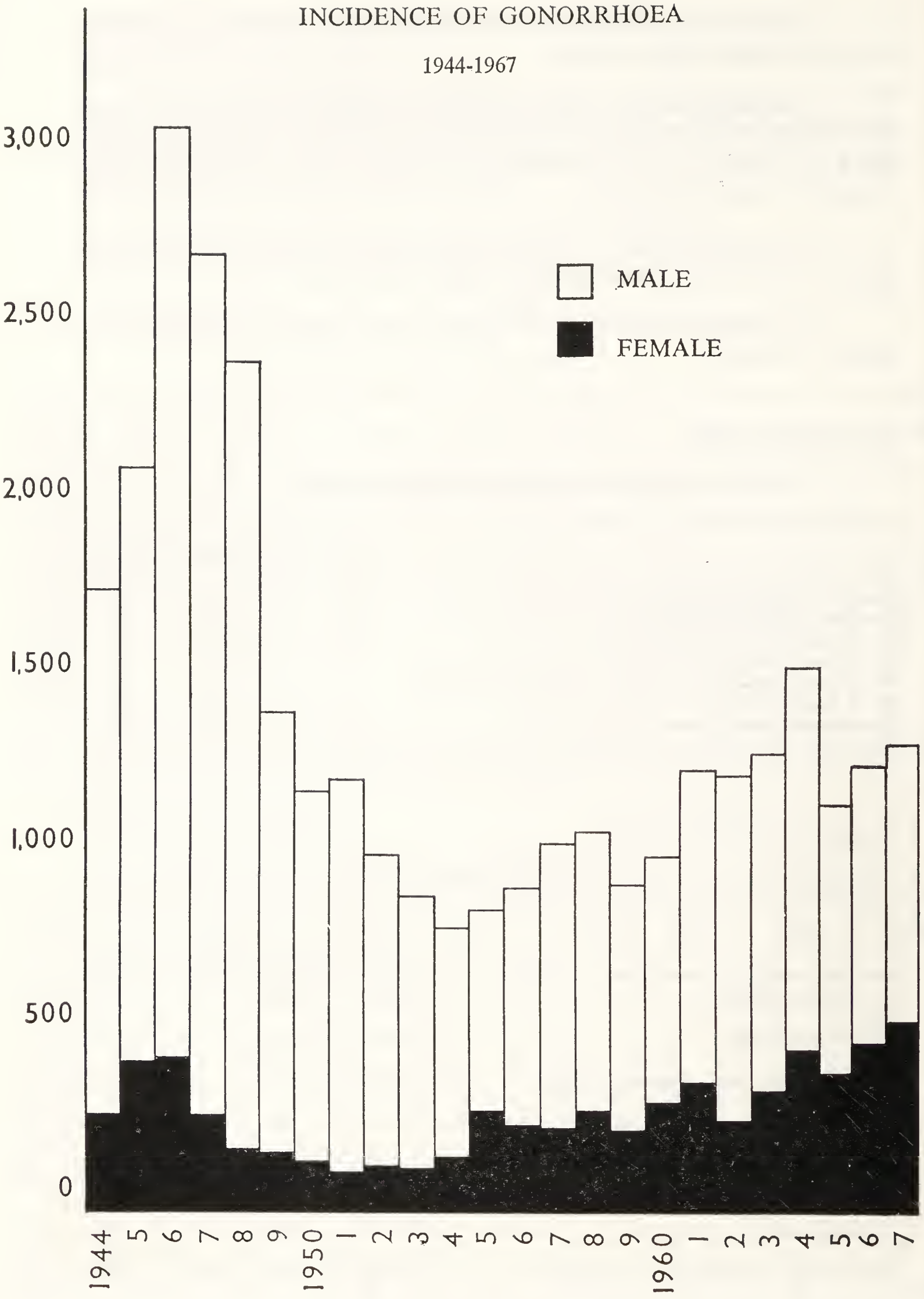
	Male	Female	Total
Number of reports of alleged source of infection	5	72	77
Number of individual persons	5	65	70
No. of cases traced and interviewed	3	40	43
No. of cases traced but interview not effected	—	3	3
No. of cases reporting at Clinic following interviews ...	3	40	43
No of cases untraced	2	22	24
No. of visits made (home, lodging, club etc.)	11	164	175

Results of Home Visits

	Male	Female	Con-genital	Total
No. of cases visited	491	349	1	841
No. of visits made	1,143	1,204	2	2,349
No. of cases attending following visits	237	230	1	468
No. of cases promising to attend but failing to do so	49	26	—	75
No. of cases removed or not known at address given	84	56	—	140
No. of cases not contacted, no access, away from home, etc.	64	25	—	89
No. of cases who refused to re-attend	19	4	—	23
No. of cases removed and transferred for follow-up	38	8	—	46

INCIDENCE OF GONORRHOEA

1944-1967



INCIDENCE OF SYPHILIS

1944-1967

Defaulting Patients

	Male	Female	Congenital	Total
No. of cases written to	1,286	978	10	2,274
No. of letters despatched	1,774	1,958	10	3,742
No. of cases reporting in response	657	526	9	1,192
No. of letters returned by Dead Letter Office ...	156	52	—	208
No. of cases traced and transferred	29	6	—	35

Cases Referred by Maternity Units

A total of nine cases were referred for fuller investigation with the following results:—

Early syphilis	4
Late syphilis	2
Acute gonorrhoea	1
Non-venereal	2
Total ...	9

Infantile Incidence

Nine cases of ophthalmia neonatorum and one of vulvo-vaginitis came to notice. During the year, three babies were found to have congenital syphilis, the maternal histories being as follows:—

(1) attended ante-natal clinic only three days before term and was found to have secondary syphilis;

(2) referred by ante-natal clinic at 30 weeks, delivered of a premature child in hospital, only four days after referral; and

(3) showed negative serology at ante-natal clinic in early pregnancy, had normal delivery of an apparently healthy male child which was found to have syphilis at six weeks.

MENTAL HEALTH SERVICE

Introduction

Though there was no large-scale development in the Mental Health Service comparable with those of the previous few years, the year was one of steady consolidation and planning for the future.

The vast scheme for the welfare of mentally subnormal people at New Hall, Fazakerley, has not yet been completed but work started on the modernisation of the swimming bath and laundry, upgrading of roads, etc. The adaptations to six buildings to fit them as residential hostels were, in fact, completed but it was not possible to occupy them during the year owing to a major difficulty in the electricity supply installation. This was in process of being remedied at the end of the year.

Other capital schemes progressed on paper—the Ministry approved a plan to adapt a building at New Hall as a special centre for mentally subnormal people with additional physical handicaps, and with the building of this centre, it is hoped in 1968, the New Hall scheme will be complete.

The provision of homes or hostels for mentally ill people and for the erection of training centres and a workshop on the Netherley estate are also in the planning stage.

A significant feature of the year's work in regard to the admission of patients to psychiatric hospitals has been a reduction in the use of the emergency procedure and this will be described in detail later in the report.

Hostels, training centres and the sheltered workshop have all been fully occupied and pressure is beginning to build up for the extension of these services. The heart of the service continues to lie in the help and advice offered to mentally disordered people living at home and the work in this field is reviewed first.

Home Visiting

It should be emphasised that this part of the service is entirely permissive and unless the officers concerned are able to engage the interest and co-operation of those with whom they are dealing, they have a hard and often hopeless task in trying to help them. It says a good deal for their patience and sympathy that so many patients do co-operate.

The old impression of statutory officialdom dies hard and perhaps the process is prolonged in the case of mental welfare officers by their necessary intervention in "compulsory" admission to hospital. But in fact no public service is run with less red tape and less strings attached to the help given. The visiting staff now consists of 23 mental welfare

officers (including six seniors and three assistant seniors), four trainees and four welfare assistants, working under a Superintendent and Deputy Superintendent. Among them are three specialist officers; one dealing with employment problems, the second acting as a liaison officer with hospitals and seeing patients about to be discharged, the third occupied with the children and adults at training centres.

At the end of the year the total number of people being visited was 3,302, comprising 1,815 mentally ill and 1,487 mentally subnormal; the total number of visits during the year was 19,767.

Great weight is given in the Mental Health Act to the value of home visiting and as an illustration of its operation, one officer's visiting list, as it stood at the end of the year, has been analysed. This particular officer has operated in the same district for the past five years and during that time some 500 people have passed through his hands. In the past year, with the aid of a trainee who did many routine visits, he took on 118 new cases and ceased visits in 85 cases. It was found that, despite changes in his list, of 126 mentally ill people on it at the end of the year, sixteen had been visited for more than four years, twelve for more than three, 27 for more than two and 41 for more than one year. Twenty of these long-term patients were frequently admitted to hospital and discharged again after a short period; one has, in fact, had eighteen admissions in four years, but this may be regarded as a tribute to the usefulness of new drugs rather than a failure; in former days this man might have been a life-long hospital patient. The interaction of cause and effect was strikingly illustrated in many cases—for example, a woman married to a psychopath; a male prostitute and drug addict; a woman whose four illegitimate children each had a different father; a man living alone who has had both legs amputated; a husband and wife both mentally ill with five children taken into care but the wife again pregnant. These were some examples of the need for care in the community.

The problem of loneliness (or social isolation to use the now popular term), and its effect on mental health must exercise the minds of mental welfare officers and all have on their lists a high proportion of people living alone—on this particular list there were 25 such cases at the end of the year. The value here of group activities, in particular the department's therapy and social centre, is obvious and every effort is made to persuade these lonely people to attend. Not all, however, do so and many drop off after only one or two attendances. This problem underlines the need for hostel accommodation. Many of these people flit from furnished room to furnished room and give the officer no chance of making a real impact.

Specialist Officers

The officer who attends Rainhill and Sefton hospitals to deal with difficulties which some patients are likely to encounter on their discharge,

has further developed his work during the year in co-operation with the hospital medical staff and social workers; 850 people were seen in hospital and there were many visits to relatives and neighbours. This is a very personal service; the officer is now so well known on the wards that all manner of patients discuss their problems with him.

The training centre liaison officer had a busy year as usual, making 1,500 visits to parents. Such matters as transport, diet, short term care, the assessment of the needs of newly referred children and, of course, the child's progress are among the subjects that come up during her visits. She then sees the supervisors of the centres and goes into all these matters with them. Over a period of many years this officer has built up a relationship that is invaluable in the smooth running of the centres.

The work of the third specialist mental welfare officer, who has in the past been occupied exclusively with employment problems, has changed direction recently. He continues to make personal contact with prospective employers in some cases, but less often than formerly. The disablement resettlement officers of the Ministry of Labour have taken an increased interest in resettling mentally disordered people and the officer is often able to pass cases over to them with confidence knowing that they will consider the individual's particular characteristics and needs.

The opening of the New Hall Hostels and Workshop has resulted in a demand for his services as a liaison officer for the 300 adults who attend the workshop, some of whom live in the hostels and, in effect, he has all these people on his visiting list (helped by two welfare assistants), making reports on the hostels' residents just as if they were living at home with their parents.

Direct approach to employers is now concentrated more on finding jobs for the mentally subnormal but he makes no effort to place anybody until there is a prospect that the job will be held. To this end, he and the manager of the workshop watch progress over a substantial period and give attention to the differences which will face the worker in open industry. Thus when selected for a trial there is much less risk of failure after a day or two and unhappiness in consequence.

For the vast majority of the people for whom the workshop is catering, the sheltered atmosphere will always be best for them in terms of a happy life and in fact no more than nine people were found posts during the year; all nine have been employed six months or more at the time this report is being written.

The appointment of welfare assistants to help these last two officers with the more routine visiting has proved useful.

Voluntary and Other Organisations

Before leaving the subject of community care, the Medical Officer of Health would like to pay tribute to the organisations which help so much in the welfare of mentally disordered people. All mental welfare officers refer patients to them as a matter of course—if there are legal or financial problems the Personal Service Society will always take an interest; hostel accommodation is provided by the Salvation Army and Church Army; several societies run social clubs; the Men's Voluntary Services have volunteers who use their cars to take visitors to hospital, etc.; the Red Cross and St. John Ambulance Societies help in many ways and the very active Liverpool Society for Mentally Handicapped Children, besides running its centre, Mencap House, and social clubs, is interested in all aspects of the welfare of the mentally subnormal. This list, of necessity, omits many other voluntary organisations to whom only occasional reference is made but who are always helpful when called upon.

The service is naturally in close contact with many public authorities and departments, and the excellent relations existing with the Ministry of Social Security may be mentioned as an example. Often enough a patient refuses to collect an allowance to which he is entitled and the expense of his maintenance falls on relatives who cannot afford it. The Ministry officers have been most helpful when approached and do their best to help in such cases.

Hospital Admissions

Home visiting by mental welfare officers has many points in common with that of other social workers but their part in the admission of mentally disordered people to hospital is unique. The usual method of admission is informal and even here the officer may be asked to help, for the patient's willingness may be marginal and the officer's support may be the means of necessary treatment being obtained without compulsion. During the year mental welfare officers did, in fact, assist with 587 informal admissions; a number of these were cases in which compulsion was felt necessary at first but eventually avoided.

The Mental Health Act has, however, had to provide a statutory procedure for use when a patient needs hospital admission but is actively opposed to it and here the mental welfare officer has a statutory duty to apply for admission on medical recommendation if he is satisfied that an application ought to be made by him.

The Act has two chief methods for this purpose—Section 25 detains the patient for up to 28 days "for observation" and Section 26 authorises "treatment" for up to twelve months. Both of these require two medical recommendations, one being from an approved practitioner. If a real emergency exists and neither of these methods is practicable, a

doctor is entitled to make a recommendation for admission under Section 29 which, if carried out, has the effect of compelling the patient to remain in hospital for up to 72 hours, after which he must be discharged or the other procedures instituted or else become an informal patient. The mental welfare officer has the duty of applying for the patient's admission as stated above (except in the very rare circumstances when a close relative is willing to do so).

The emergency procedure should only be used when strictly necessary and early in the year the Principal Regional Officer of the Ministry of Health, in a memorandum to the Regional Hospital Board, which was later circulated to the Health Committee, gave figures of admissions which were taken as implying that there might be over-use of it in Liverpool. The Medical Officer of Health went into the matter fully in a report to the Health Committee in July and, in view of its importance, it is proposed to summarise the chief points of the report here (the figures being brought up to date).

The figures for the previous six years of admissions of Liverpool patients in which mental welfare officers were involved are reproduced below, together with the 1967 figures which have since become available :—

	1961	1962	1963	1964	1965	1966	1967
Type of Admission							
Section 29 (Emergency)	944	1,116	1,083	958	777	711	258
Section 25 (Observation)	85	56	65	88	199	171	319
Section 26 (Treatment)	13	9	13	10	4	7	9
Section 60 (Court)	20	18	22	19	17	21	24
Informal	51	144	109	174	299	399	587

The downward trend up to 1966 had been noted in the Ministry memorandum and the report explained that this was a natural outcome of a continuous attempt to carry out a planned programme to bring together general practitioners, hospitals and the mental health service. There is no doubt that in the earlier years the mental welfare officer felt that, under the new Act, he needed to defer to the decision of the general practitioner who instituted the emergency procedure and only in the course of time was a more equal partnership evolved.

Part of the further decrease in the 1967 figures is thus due to the continuance of this policy but some of the dramatic drop must be attributed to a stricter briefing of the officers to ensure that they did not merely act as a rubber stamp for the doctor but used their judgement and experience to advise on alternative procedure.

Seeking still further the reasons for the use of Section 29, the Principal Medical Officer (Mental Health), and Senior Registrar (Professorial Unit) at Rainhill Hospital, investigated in detail every Liverpool

case admitted to Rainhill under this section between November 1966 and April 1967. In this period, from 151 patients referred to mental welfare officers for emergency admission there were 100 admissions under Section 29, the remainder being dealt with in many different ways, including 25 informal admissions, 6 admissions under Section 25, and single cases of admissions to general and geriatric wards, attendance at clinics, continuance of after care, etc. It was evident from these figures that mental welfare officers were using their experience and independent judgement to some effect.

The two doctors held an "inquest" on each of the 100 cases soon after their admission. They decided that Section 29 admission was the right procedure under the circumstances in 74 cases. In the remaining 26 they made it clear that some form of hospital admission was necessary but felt (with the advantage of hindsight of course) that ideally other procedures could have been used : in ten cases a second medical opinion could have been obtained even though the general practitioner completed a Section 29 recommendation; in seven cases a consultant psychiatrist had been approached and it should have been possible to admit the patient for treatment or observation; in four cases patients were in general hospitals at the time action under the Mental Health Act was taken and, again ideally, a psychiatric opinion should have been available (in practice a junior hospital doctor may not have felt justified in calling out a consultant at night).

The medical investigators reached the following conclusions :

(*a*) there was no unjustified use of Section 29 under the circumstances existing;

(*b*) the chief concern of all the people involved is, after all, that a patient requiring hospital admission should get it and the initial method must be left in the hands of the referring doctor, the mental welfare officer and, where necessary, the consultant psychiatrist; and

(*c*) there will always be a hard core of emergency admissions but these will further decrease as more facilities are available—e.g. quicker action by consultant psychiatrists, more psychiatric clinics (some of which could be held on mental health service premises as are the addiction clinic at Princes Road training centre and a clinic at maternity and child welfare premises in Speke), provision of psychiatric units as planned by the Regional Hospital Board at Walton and Broadgreen Hospitals and the emergency admission of old people to hospitals other than acute psychiatric hospitals.

It will be realised that the above is a summary only and for full discussion it is necessary to refer to the report which was circulated to

the Regional Hospital Board and Liverpool Executive Council as well as the Health Committee. It is necessary, perhaps, to emphasise also that a very high degree of co-operation with other psychiatric services has already been achieved and there is every reason to maintain that the mentally ill person in Liverpool receives prompt, courteous and up-to-date treatment and careful after-care.

Hospital admission for the mentally subnormal presents a different picture. Here there are no doubts about procedure—practically all admissions except those arising out of court proceedings are now informal —the days are gone when a cumbersome legal process was necessary before a handicapped person could obtain admission to hospital.

It is also evident that the development of the community services is having an effect on the demand for hospital care—out of 64 children notified as unsuitable for education in school in 1967, nine were either admitted to hospital or placed on the waiting list. In 1957 the numbers were 66 and eighteen. In the interim, training centres, workshop and hostels have been opened, more short-term care is available and special care classes at centres cater for those with physical handicaps. But the fact remains that there *is* a waiting-list, though it is much smaller than years ago. At the end of the year it comprised eighteen top urgency and 26 others.

Establishments Administered by the Mental Health Service

	Number	Accommodation
Junior Training Centres	5	320
Adult Training Centres	2	120
Sheltered Workshop	1	300
Residential hostels for mentally sub-normal adults ...	7	76
Occupational Therapy and Social centre for mentally ill	1	30

In addition, some mentally ill patients attend occupational therapy centres which are predominantly for the physically handicapped, at Rumney Road and Fazakerley.

No new establishments were opened during the year.

Junior Training Centres

Centres are situated at Princes Road, Dovecot, Garston and Fazakerley, where two centres form part of the New Hall complex. In addition, the Health Committee supports the Liverpool Society for

Mentally Handicapped Children's centre, Mencap House, by a 50 per cent per capita grant for 30 children and provision of free transport.

Work during the year has continued along the usual lines. The children are in small informal groups, academic training is at the elementary level suitable for those of very limited capacity and programmes aim at social and personal development through practical situations. A point which is sometimes forgotten is that many suffer under additional handicaps—epilepsy, incontinence, a propensity to violent and unpredictable action—which disrupt the smooth running of group activities and necessitate individual attention. This is one of the points to remember when the question of responsibility for these centres is discussed.

Though the Mental Health Act placed this responsibility on Health Authorities there is now a substantial body of opinion which favours its transfer to Education Authorities. The "right to education" is demanded for all children and there can be no denial of the right provided the term "education" is used in a wide and realistic sense. Many of those engaged in this work over many years fear, however, that parents, concerned with the "stigma" of their child being regarded as "ineducable" (the official term is "unsuitable for education in school") may nourish hopes that school education can transform the child's intelligence.

However harsh it may seem, it needs to be said unequivocally that such hopes cannot be realised—severely subnormal children cannot be brought by any method of training or education, whichever term is used, to a normal standard of intelligence. But if intellectual capacity is inexorably limited by nature the feelings and will are capable of much development and it is in this region that training centre work is mainly concentrated and in which medical supervision is so valuable.

Another point not always realised is that a large number of educationally subnormal children do remain at school—there are 2,400 of them in Liverpool's special schools. Thus those who, after extensive tests and consultations carried out by officers of the Education Department, are regarded as unsuitable for education in school are nearly all *severely* subnormal.

At the end of the year there were 526 such children (age 0-15), including 64 referred to the Health Department during the year.

This total, however, includes 167 who are accommodated in mental subnormality hospitals of the Liverpool and Manchester Regional Hospital Boards and the actual number of severely sub-normal children of school age living in the community is just over 300.

Workers at New Hall Sheltered Workshop

Work Room at New Hall Sheltered Workshop — General View

Slum Clearance — Changing Sky

Children with additional handicaps are included and it is the policy in Liverpool to extend the facilities for them. Each junior centre now has a room set aside for them but the plan is to open a special centre at New Hall also suitable for adults, through the adaptation of an existing building. Expectations that this would be opened in 1967 were not realised but it is hoped that the coming year will see its completion. The Regional Hospital Board is interested in the plan and is likely to provide nursing assistance.

Adult Training Centres

The two centres, both at New Hall, have been fully occupied all the year. There is always some mobility between them and the sheltered workshop, as they form an assessment unit for the latter.

The social training given at junior centres is continued, with particular emphasis on outside activities. Many instructional visits were paid, e.g., to local shops, a railway station and shunting yard, a police station, a post office and sorting office, the two cathedrals, docks, etc. Photographs were taken on walks in the district and sketch maps were made on return to the centre. Outside telephone calls were made and the use of the 999 call explained.

The people who remain at the centres are those who are not fitted for or who do not like the more organised work of the workshop.

Sheltered Workshop

This also has reached the limit of its capacity, nearly 300 adults attending each day. It has been possible to provide all with gainful occupation (even if the amount available for each is small) throughout the year and thanks are due to the firms who provide work. Unfortunately, one of the mainstays of past years, the Gee Manufacturing Co., moved out of Liverpool and the work done for them was lost but new work included the assembly of parts for cookers and washing machines (English Electric); sub-assemblies (Plessey), cardboard divisions (Poland Packing Co.), and short-term work for a number of other firms.

The total earnings (which are divided without deduction among the workers) were £6,150 as against £6,950 last year. The loss of the Gee Co. contract was one reason for the reduction but it also reflected some recession in trade locally. It is, in fact, difficult to keep up a full production with sufficient variation to employ the varied grades of mentally subnormal people who attend.

It should be mentioned that the workshop only closes for the statutory holidays, training centres, on the other hand, close for periods similar to school holidays.

Transport to Centres

Training centres and workshops are very largely dependent on transport, in that none of the children and only a proportion of adults can reach the centres on their own. When in 1948 the department took over the only Liverpool centre then in existence (Princes Road) a "guide" was employed who collected a few children and brought them on public transport; apart from this parents had to accompany their children—an intolerable hardship in some cases. As centres developed, Corporation buses were hired and are still used. Their routes are somewhat long and circuitous and they can only be obtained between peak hours. The hours at training centres are thus rather shorter than they might be. Door-to-door transport has not diminished the need for buses but brought in those people who could never have travelled by service bus.

Some of the adults at the workshop are encouraged to travel by bus on their own and have been given bus contracts for this purpose.

Finally, not all children live close to the special 'bus routes and in such cases parents, acting as escort, as well as the children have their fares paid on public transport.

The following are the full arrangements: eight special buses take 250 children and 150 adults, fifteen special ambulance department vehicles take 90 children and 35 adults (other handicapped people also travel on these vehicles), 80 adults use bus contracts, and seventeen children (each with a parent) have bus tickets.

Hostels

The chief non-event of the year has been briefly mentioned—six hostels at New Hall ready for occupation could not be opened owing to a deficiency in the electricity supply installation. This is being remedied and it should be possible to open about the middle of 1968. Meanwhile the seven hostels already open at New Hall have continued in full occupation, with little movement in or out, as the following figures show :

In residence 1.1.67	27 men 38 women
Left during year	1 man 2 women
Took up residence during year ...	5 men
In residence 31.12.67	31 men 36 women

Forty-eight of the residents were previously in hospitals and nineteen have come direct from the community.

The age groups of those in residence at 31st December, 1967, were :—

	Men	Women
Age 16–19...	2	1
20–29...	3	11
30–49...	18	11
50 and over	8	13

Short-term accommodation has been provided for 21 people, chiefly attenders at the workshop taken into residence while their relatives went on holiday.

The features of life in the hostels have been described in previous reports and no significant changes have been made. A week's holiday at St. Annes was greatly enjoyed and there has been a full programme of social events. A number of residents attended evening classes.

New Hall

It is recognised that the special features at New Hall are bound to attract visitors and through the year there was a stream of parties and individuals. Approximately 500 people in all were conducted around the estate, apart from the many parents and friends who attended on open days.

It will be remembered that the size of the devolpment gave rise to some misgiving in the early stages—would so many mentally sub-normal people, concentrated at one spot, give rise to criticism in the neighbourhood, could "institutionalisation" be avoided. The fears prove to be illusory; the neighbourhood has accepted the development with calmness and co-operation and the inevitable centralisation—of meals, etc.—has not produced any atmosphere of a closed community.

The appearance of the estate in the second half of the year was somewhat marred by the evidence of its last phases of development, in particular the driveway was in process of being improved and baths and laundry modernised. But when this work is finished and the new special training centre, referred to earlier, is opened, the estate will present a going concern which will be a witness to the fact that the community has accepted its responsibility to give these handicapped people a full and happy life.

Mental Health Centre, Johnson Street

As well as being an occupational therapy and social centre for mentally ill people, this building is the headquarters of the mental health staff and the closest co-operation is thus possible between staff and patients. Attendance of about 30 each day, which is the most the centre can conveniently take, has been maintained and the weekly evening social has been fairly well patronised.

It must be admitted that the original purpose of the centre has not been altogether realised. It had been thought that it would act as a half-way house between hospital and complete rehabilitation into the community but the rapid turnover that this would have meant has simply not come about. Instead there is a large nucleus of "permanent" attenders. An analysis of those who were attending regularly or sporadically at 31st December, 1967, shows that thirteen had been coming for

four years, another thirteen for two years and sixteen for between six months and two years. Many, of course, had periods of hospitalisation in these times but it is true to say that, on any one day, about two-thirds of the attendance comprises the "regulars" who find the centre a friendly place but who are unable to venture into employment.

Contrasted with this group are the patients whom the centre would probably benefit but who fail to turn up or fall away after two or three attendances. Of 383 people referred since the centre was opened six years ago, 78 never attended at all and 72 others left before any benefit could be derived, and this despite much encouragement by the mental welfare officers who referred them.

With all its limitations, not the least of which is its lack of space, the centre is nevertheless fulfilling a useful purpose. It must be remembered that the mental health service is dealing with people who not only cannot help themselves but who have often fallen foul of other social services. If they are genuinely ill it must not reject them, though they frequently reject it. The service must be prepared for many apparent failures, especially when it is realised that the Regional Board also provides a somewhat similar function in its day hospitals to which naturally gravitate many of the more "rehabilitable" patients.

AMBULANCE SERVICE

Working Party on Ambulance Training and Equipment

The publication by the Ministry of Health of the report of the Working Party on Ambulance Training and Equipment, and in particular Part I—Training, in 1966, was one of the outstanding developments of that year and during 1967 efforts have been made to implement its recommendations wherever possible.

Part II of the Report, dealing with equipment, was published in March, 1967, makes some 71 recommendations, and stresses the need for a greater degree of standardisation of equipment. There is also considerable criticism of the existing vehicles used for stretcher patients. Although the reputation of certain products has led to their widespread general use it was found that there were important items of equipment, such as stretcher gear and stretchers, in which there was little standardisation.

Whilst it is accepted that standardisation for its own sake is to be deprecated and the exercise of ingenuity and experiment encouraged, the Working Party considered that a greater degree of standardisation than exists at present is required and could be achieved. This is necessary to ensure that equipment is interchangeable and to enable all to benefit from improvements in design. When several ambulance authorities serve one hospital or, as may happen, attend a major accident, the recovery of equipment after the incident and the smooth transfer of patients within the hospital would be facilitated by all services using standard items. The training proposed would benefit from a greater degree of standardisation of equipment and vehicles, in that techniques which new entrants learn at training schools would not have to be related to the different equipment and vehicles used by their own authority.

The main items on which recommendation has been made are:—

(*a*) Stretcher gear and stretchers.

(*b*) Other basic equipment for ambulance vehicles.

(*c*) Rescue equipment.

(*d*) Major accident equipment.

(*e*) Equipment for journeys by rail and air.

(*f*) Uniform and insignia.

(*g*) Radiation risk equipment.

(*h*) Equipment for infectious disease.

(*i*) Control equipment.

(*j*) Radio equipment.

(*k*) Portable incubators.

(*l*) Vehicles.

(*m*) Contents of first aid satchels and dressings.

It is realised that, if a contribution is to be made to efficiency and standardisation, a detailed specification is needed of the article or vehicle considered most suitable. In most cases this would require further study and sometimes intensive research, which could be carried out by the Central Ambulance Services Council and in particular its Equipment Committee, as recommended in Part I of the report. The Council, assisted by its Equipment Committee, would have the following functions with regard to equipment :—

(*a*) To co-ordinate the work done by individuals and particular bodies.

(*b*) To set out detailed specifications.

(*c*) To standardise items of equipment where interchangeability is required.

(*d*) To offer advice on new equipment as it becomes available.

(*e*) To promote research including field trials.

Staff Training

Eleven cadets were recruited in February, 1967 and seven finished the full course, sat the preliminary examination of the Institute of Ambulance Personnel in April, 1967, and became fully operational in June, 1967. In addition, four ex-cadets were successful in passing the Diploma examination in October, 1967.

Training courses continued for those members of the service who have not had the same opportunity for initial training as cadets and, for the fifth successive year, the service continued to have a 100 per cent qualified staff.

Case Load of Patients

The number of cases moved throughout the year amounted to 283,455, a decrease on the previous year of 6,406. One explanation for a decrease of approximately 4,000 of these patients is that Walton Hospital have now purchased their own vehicle for internal transport during reconstruction. Nevertheless, over 2,400 patients less have been moved and full credit must be given to the Control Officers and hospital transport officers for their efficient co-ordination and constant supervision. Ambulance vehicles travelled a total of 1,039,806 miles using 56,692 gallons of petrol and 5,142 gallons of diesel fuel.

OCCUPATIONAL THERAPY

In 1967 the occupational therapy section has continued to provide a service for the physically and psychologically handicapped of Liverpool. Staff changes have been few, necessitated by family commitments and vacancies have been filled quickly. Continuity of treatment has thus been preserved with a minimum of disruption.

On various occasions throughout the year social activities have been arranged for patients, including the shopping evening at Christmas at Lewis's Store, the Cathedral Carol Service, a visit to the Town Hall, cinema and theatre visits, as well as the annual holiday at Caernarvon.

Rehabilitation Units

No new units have been opened although plans for the conversion of the Old Smithy at Speke into a small unit are under discussion. At present patients resident in the south end of the City have to make the long journey to Kirkdale or Fazakerley. It is hoped that work on the Speke unit will proceed during 1968.

The Deputy Medical Officer of Health has continued to hold clinical sessions at both the existing units, seeing patients at regular intervals. In addition, during 1967, each prospective patient at a unit has also been interviewed at home by the Deputy Medical Officer of Health, thus providing additional insight into home conditions and difficulties arising therefrom. Half-day attendance at units has also commenced this year and this is advantageous to those patients whose domestic arrangements do not permit an early start or who would find a whole day excessively tiring.

Rumney Road Unit

This unit has been fully staffed by two occupational therapists throughout the year. Attendances, for the 52 patients currently receiving treatment, range from half a day to five days weekly, and 34 new patients have commenced treatment with a corresponding number discharged. When the maximum benefit from occupational therapy has been obtained it is sometimes difficult to discharge the patient without causing psychological damage as he or she often becomes very dependent on the companionship which is a feature of attendance at a unit. This can be partly allayed if the patient can be discharged to a Handicraft Class run by the Welfare Department as by this means social contacts are maintained.

After very lengthy treatment at this unit, one patient was employed in open industry and two in sheltered workshops. Contact is maintained with the Disablement Resettlement Officer as the aim of treatment, especially with younger persons, is towards employment.

An illustrative case history is that of Miss M., aged 27, who was referred in the first instance as being in need of rehousing. She had been severely handicapped since the age of 18 by ankylosing spondylitis. She could barely walk, was in considerable pain and becoming very depressed as her future seemed to hold nothing but a life of chronic invalidism. She had made tremendous efforts to obtain employment but the situation was hopeless due in the first place to her inability to use public transport. A recommendation was made for rehousing to accommodation without stairs and she was persuaded to attend an occupational therapy unit. Treatment was directed towards the prevention of further limitation of joint movement, strengthening of muscle power, alleviation of depression, maintenance of previous training as a comptometer operator, and encouragement of independence with a more hopeful attitude to the future. Acceptance within the group was rapid and during the period of treatment it became apparent that if she were to travel to a job she would need an Invacar and garage and these were included in the request for rehousing. Eventually the flat, car and garage were acquired and Miss M. will now attend a refresher course in comptometer work which should enable her, in the near future, to obtain a job in open industry.

The case of Mr. F., aged 34 years, is also of interest. Initially, like Miss M., he was brought to the attention of the department as being in need of rehousing. He had been involved in an accident and this had resulted in a double below-knee amputation and temporarily he was virtually a prisoner. Being used to the active outdoor life of a seaman, this isolation and inactivity was having serious psychological repercussions, not only on Mr. F. but also on his wife and family of four young children. A recommendation was made to the Director of Housing for the allocation of a three-bedroomed parlour-type house with a garage, as with Mr. F's personality it seemed likely that he would quickly be able to use the artificial legs with which he was to be provided, but would probably require an Invacar to travel any distance.

Treatment at the occupational therapy unit was directed to maintenance of strength in upper and lower limbs with maintenance of balance, desensitisation of stumps, preparatory to the fitting of artificial legs, and provision of interests. Woodwork was the main activity used and Mr. F. has responded well. Adjustment to his new legs was rapid and after graduated exercise with them in non weight-bearing activities such as weaving and the Oliver Rehabilitation machine, he proceeded to weight-bearing exercise between parallel bars, crutches, sticks and finally walked unaided. The question of rehousing is being dealt with and, with the help of the Disablement Resettlement Officer, Mr. F. should fairly soon be retrained and leading an independent life.

Longmoor Lane Occupational Unit

This unit had two changes in staff during the year but remained

fully staffed throughout. Six of the younger patients were discharged to enter some employment. Others have been discharged to Handicraft Classes run by the Welfare Department and some have returned to their homes at the completion of treatment. The register, at present, numbers 75 and patients attend from half a day to five days per week.

During the year a bathroom was made at the unit fitted with both a bath and a thermostatically-controlled hand-shower. Hoist equipment at floor level or overhead level enables severely handicapped patients to be bathed with the minimum of help. A wide variety of bath aids is provided for the less severely disabled. As with other equipment and facilities at the unit, the purpose of these aids is twofold, on the one hand, patients can use the apparatus provided and/or be assessed as to its usefulness for fitting in their homes.

An electric typewriter has proved to be a useful addition to the equipment. This typewriter responds to a very light touch and has enabled patients, with very limited power in the upper limbs to type unaided or with a stick strapped to their hand. Patients with progressive illnesses involving speech and loss of movement find this typewriter helpful in problems of communication.

A tape recorder has also been obtained this year and used in play-reading, keep fit to music, or in helping to correct speech defects.

Patients in wheelchairs have had gardening added to the range of their activities by the provision of a raised garden plot. Plans are afoot to purchase a greenhouse.

Two case histories illustrating the work at the unit are presented. Mr. M. had a long history of schizophrenia. He was referred to the unit by the Mental Welfare Officer shortly after his discharge from hospital. Initially Mr. M. was withdrawn, his movements were dismally slow and he found it difficult to comprehend instructions. He was put to work on a simple group woodwork project where he was required to glue materials together. However, he required constant supervision and, if left for even a short period, he would simply roam around the work-room. After this assessment period it was felt that Mr. M. would benefit from light repetitive work. He was therefore transferred to making chamois leather mops. Here he became more cheerful and took a real interest in his work and in the work of those around him. A great step forward was when Mr. M. expressed an interest in gardening, and was given responsibility for some indoor plants and helped in the upkeep of a small plot outside where he chose and tended the plants he wanted. He maintained interest in this activity throughout the summer months. As his interests widened he became much quicker and the next step would seem to be employment in light industry.

Miss X., aged nineteen, has a congenital spastic diplegia with resultant weakness and deformity in her legs. Her upper limbs are unaffected. She attended a special school for physically handicapped children until she was 16 and was then referred to occupational therapy as she was considered unsuitable for employment on a physical and psychological assessment. It was impossible for Miss X to walk more than a few yards and she could not use public transport. Her appearance was dirty and slovenly and her concentration span was short. Treatment was given on the Oliver Rehabilitation Machine for lower limb strengthening and joint mobility. Walking practice was given between parallel bars. Miss X. was taken to appointments with an orthopaedic surgeon so that correct footwear could be supplied. Home conditions were far from ideal and family co-operation had to be achieved. A year passed without any apparent progress in this respect although walking showed improvement and during the second year of treatment she was able to use public transport. Her concentration span improved and good work habits were established when she became a member of a group doing simple printing. The remaining difficulty was the persistent refusal to show any interest in personal appearance or cleanliness. However, this was apparently linked with home conditions as when they changed, Miss X. became neat and clean and the occupational therapy staff felt that she was ready for outside employment. In co-operation with the Disablement Resettlement Officer Miss X completed a six-week assessment course at a local Industrial Rehabilitation Unit and was then given employment on simple assembly work with a local firm.

Johnson Street Unit

Johnson Street Occupational Therapy Unit has, as usual, operated at full capacity throughout the year. As the patients are mainly handicapped by a long history of mental illness it has proved increasingly difficult to place them in employment. Some of the women have been able to hold a part-time domestic job but unskilled labouring jobs for the men are increasingly scarce.

Activities at the unit include making articles such as panscrubs, babies' bibs, chamois leather mops for contract, hand printing, etc., which enabled the occupational therapist to assess the patient's capabilities and helps the patient to maintain work habits. In the afternoon, social activities are organised. These include discussions, visits to places of interest and games. This year badminton has been a popular activity. A small selected group was encouraged to join a local authority's evening class on Scottish Dancing and thus widen their outside contacts. Other social activities included the weekly evening club, the Christmas Party and the annual week's holiday.

A mid-day meal continues to be cooked by the patients but as attendances are so high this task is not now felt to be relevant to the

life of the patient at home. It is hoped that soon a small group will cook each day for the equivalent of a normal family, while the other patients will have a meal provided by a central kitchen.

Holidays

In June a party of young physically handicapped patients from Longmoor Lane unit were taken to a Youth Hostel at Penmaenmawr. As always in occupational therapy the aim was to teach the young people self-reliance. The idea was explained to the youngsters and they were told that it was up to them to plan the holiday programme and the catering. Although the party was told this well in advance and the staff were always available to help if requested, no plans were made and this attitude was prevalent throughout the holiday. The expedition was by no means unsuccessful, it was greatly enjoyed, but probably the main benefit was to reveal to the therapist concerned just how dependent upon authority the majority of handicapped youngsters become. It is hoped that this type of holiday will become an annual event as its potential value is great.

Domiciliary Occupational Therapy

Domiciliary Occupational Therapy has again been mainly concerned with the assessment and supply of aids to daily living. Considerable delay is unfortunately encountered due to administrative difficulties and it is not uncommon for the patient to have to wait six months beteween assessement and supply of an aid.

New Activities

Clinic for Children with Spina Bifida

This was started in November, 1967, for the increasing number of children now in the community who suffer from this disease. At present 20 children attend in two groups at fortnightly intervals. Nearly all are myelomeningoceles and have had surgery on their backs and a Spitz-Holzer valve fitted. All have varying degrees of lower limb paralysis.

The purpose of the class is to instruct the children in walking in their newly-fitted calipers and to strengthen upper limb and trunk muscles so that heavy walking aids can be manoeuvred easily. A play session is included as these children, being handicapped from birth, are frequently over-protected and lack initiative or the ability to "stand up for themselves". Individual treatment is usually required so the staff/patient ratio is high. Staff consists of four occupational therapists, one occupational therapy student, a health visitor and a district nurse. The Deputy School Medical Officer visits monthly for discussion and assessment with a view to educational requirements. A paediatric surgeon also visits. As yet, it is too early to assess the value of treatment but

there is evidence of increasing mobility and some of the children are able to sit with less support, indicating stronger trunk muscles. Treatment is designed to continue until school age is reached.

Renal Dialysis

During the year, several "kidney machines" have been installed in patients' homes. In co-operation with consultants from the Kidney Unit at Sefton General Hospital the head occupational therapist has assessed the home situation and planned the necessary alterations and installations. Three units have now been installed and it is expected that a further four will be in operation in the near future. Before a machine can be used in the home, the patient and a member of the family must be instructed in its use by the hospital staff. Once proficiency is obtained there is usually an improvement in the patient's condition, probably due to the removal of the strain of attending hospital three nights per week.

Housing

Progress has been made on the project for providing specially designed housing for handicapped people. Following consultations with the Ministry of Health and the City Architect, it was agreed that bungalows are the answer to the problem and a plan was approved for semi-detached bungalows with garages attached. Extra circulating space required for movement of wheelchairs, provision for hoist equipment in bedroom and bathroom, central heating and non-standard equipment such as louvre-type windows, etc., are all likely to make the cost of such dwellings considerably higher than that of normal three-bedroomed accommodation. It is hoped that in 1968 permission will be given for a pair of these bungalows to be built so that their value can be assessed compared with that of altered standard dwellings.

Only a small percentage of rehousing cases referred for medical reasons need the type of facilities which will be provided in the bungalows. The majority will continue to be rehoused in the accommodation most nearly suited to their needs, e.g., flats reached by lifts, accommodation with an adjacent garage for an invalid car, which if provided by the Ministry of Health must be stored under cover. Unfortunately, with rising costs, even the provision of a ground floor toilet is becoming a major consideration. Liaison between this section and relevant sections in the Housing Department continues to be excellent to the mutual advantage of all concerned.

RE-HOUSING ON MEDICAL GROUNDS

During 1967 a total of 7,078 applications were received for rehousing on medical grounds. Of these applicants, 4,130 were already living in Council accommodation which they found unsatisfactory and applying for a transfer to more suitable property, and 2,948 were resident in non-Corporation property and applying for Council accommodation. The details of each individual application were closely examined; where necessary visits were made by a Medical Officer, Health Visitor, Public Health Inspector or Chest Diseases Visitor and information was obtained from the General Practitioner or Hospital Specialist. A full assessment of the medical factors and the housing need as they applied, not simply to the individual applicant but the whole of his or her family as a unit, was then made. In addition special requirements for handicapped persons, to enable an assessment to match the needs of the disability suffered, were recommended wherever necessary.

Of those applicants in Council property a total of 289 were recommended for a transfer; of these, 81 transfers were effected by the end of the year. In the group living in property owned by private landlords, 230 were recommended for special priority allocation, out of whom 85 were rehoused by the end of the year. In addition, 236 applicants were awarded points. Details are given in the table below :—

1967	Special Priority Cases	Transfer Cases	Totals
General Medical Cases			
Number of Applications received	2,948	4,130	7,078
Number recommended	230	289	519
Number re-housed...	85	81	166
Number refused offers	14	9	23
Number still not accommodated...	131	199	330

Contrary to popular belief, very few of the applications received were in any way fatuous. In nearly every case the medical factors quoted were genuinely related to the housing conditions and benefit would have been obtained from suitable rehousing. However, with the

severe shortage of housing accommodation in the City of Liverpool, only the more serious cases could be considered and only the number recommended where there was a reasonable prospect that the applicant could be rehoused. The major medical conditions for which recommendations were made were cardiovascular, respiratory disorders and conditions affecting locomotion. The most important single factor encountered was the inability to climb stairs, and many recommendations had to be made for rehousing into property accessible without the use of stairs. A breakdown of the recommendations may be seen in the table below :—

Diagnosis	Number awarded Points	Number recommended for Special Priority	Number recommended for Transfer	Totals
Cardiovascular	71	65	63	199
Conditions affecting locomotion ...	65	55	74	194
Respiratory Disorders	49	79	76	204
Psychiatric Cases	25	15	42	82
Malignant Disease	9	11	15	35
Debilitating Diseases	11	2	11	24
Blindness or Deafness	4	2	8	14
Broken Families	2	1	—	3
Totals	236	230	289	755

An investigation of the age and family composition of these applicants was carried out and from this it may be seen that, in a little under a fifth of all cases, the applicant was a single occupier. In almost the same number of instances the applicants were childless couples. The largest group was formed by married couples with between one and three children. Details of the breakdown according to age groups and family composition may be seen in the table on page 91 :—

HOUSING POINTS—AGE AND FAMILY COMPOSITION OF APPLICANTS

1967 Age of patient	Number awarded Points					Number recommended special priority	Number recommended transfers	Total	Position of Family									Totals
	1	2	3	4	5				Single occupier	Two adult occupiers	1 Parent + 1 or more children	Parents with 1-3 children	Parents with 4-6 children	Parents with 7+ children	Grandparent(s) + family	Parents with children and relative	Other arrangements	
0–10	1	4	11	1	10	27	23	77	—	—	3	44	18	9	3	—	—	77
11–20			3		6	5	19	33	—	—	2	16	10	2	1	—	2	33
21–30		5	6	1	6	22	22	62	1	2	7	38	6	1	6	—	1	62
31–40		6	4		9	25	32	76	4	7	8	31	18	4	2	2	—	76
41–50		4	4	1	10	27	55	101	10	9	5	44	18	4	5	3	3	101
51–60		8	15		25	42	52	142	29	56	6	33	6	2	4	3	3	142
61–70		10	21	2	27	47	48	155	52	63	9	10	1	—	14	3	3	155
70+		10	14	1	11	35	38	109	47	17	10	4	—	—	23	2	6	109
Totals	1	47	78	6	104	230	289	755	143	154	50	220	77	22	58	13	18	755

An investigation was carried out to determine the areas from which it was necessary to rehouse persons and the results may be seen in the table below :—

Postal Districts	Number awarded points	Number recommended special priority	Number recommended transfers	Totals
1	—	2	3	5
2	—	—	—	—
3	5	8	24	37
4	22	29	8	59
5	36	33	29	98
6	33	35	8	76
7	32	23	9	64
8	51	45	34	130
9	9	4	8	21
10	—	—	4	4
11	5	3	23	31
12	2	4	4	10
13	8	9	8	25
14	1	1	17	19
15	11	14	—	25
16	—	—	—	—
17	4	4	1	9
18	4	1	1	6
19	7	8	7	22
20	3	2	1	6
24	1	3	19	23
25	1	—	14	15
28	—	—	4	4
Halewood ...	—	1	15	16
Huyton	—	—	10	10
Kirkby	1	—	38	39
Other Areas ...	—	1	—	1
Totals ...	236	230	289	755

From the inquiry into the details of the factors causing persons to require rehousing on medical grounds it was obvious that the major problem was that of cardiovascular and respiratory cripples. Many more applications from persons with cardiovascular and respiratory disorders were received than for whom it would be possible to make allocations and, in most instances, insufficient information was given on the H1 forms supplied by the medical practitioner or in the letter sent. It was therefore considered necessary to compile a questionnaire to be completed by the chest diseases visitor to deal with those cases where insufficient information was available. A pilot questionnaire was introduced in 1966 and, as experience was gained, this was amended and a final questionnaire designed which is shown on page 94:—

HOUSING POINTS QUESTIONNAIRE

To be completed in cases with Cardiac or Respiratory Handicaps

To be returned to the Medical Officer of Health

Name of Patient — Sex: Male / Female

Address — Date of Birth

Type of Dwelling :	Private	Yes	No
Description :	Corporation	Yes	No
	Tenant	Yes	No
	Sub-Tenant	Yes	No

If Sub-Tenant: Authorised / Unauthorised

Hospital : Date of Attendance :

General Practitioner :

Diagnosis :

Name of Applicant and Family	Age	Sex	Sleeping Arrangements

Number of stairs to be climbed

Is Patient physically able to climb stairs ? Yes / No

If able to do so, how many times does patient climb stairs each day ?

Is toilet indoor or outdoor ?

If indoor, is toilet on ground floor or upstairs ?

GRADE OF BREATHLESSNESS

(*Mark box to indicate in which respiratory or cardiac disability places patient*)

1. No abnormal breathlessness	
2. Able to walk normally without breathlessness on the level but breathless on hurrying or climbing slight hills	
3. Able to keep walking at own slower than average pace on the level	
4. Forced to stop for breath when walking at own slow pace on the level	
5. Breathless on the slightest exertion such as washing or undressing	

Sputum—daily volume and type

Saliva

Mucoid

Muco-purulent

Lumulent

Volume in C.C.s

Does effort produce pain in the chest ?

GENERAL REPORT

Please use precise form and tabulate facts wherever possible. Where appropriate a simple diagram of the internal arrangements of the home should be included. (Whole reverse side left clear for this report).

Date..... *Signature*.....

Several ways of assessing respiratory disability were tried and eventually the questionnaire used by the M.R.C. Pneumoconiosis Research Unit was adapted. An analysis of the action taken in those cases for whom a respiratory questionnaire was completed is given in the tables below :—

CARDIO-RESPIRATORY QUESTIONNAIRE ANALYSIS

Total Number of Old Type Forms : 361
Total Number of New Type Forms : 121
Date of Issue : October, 1967

Age of Applicants	Number awarded points	Number awarded special priority	Number awarded transfer	Total Number in each 10-year age group	Categories of breathlessness 1	2	3	4	5
20–29 years ...	4	2	—	6	–	2	1	2	1
30–39 ,, ...	3	1	6	10	1	2	2	2	3
40–49 ,, ...	3	4	7	14	–	2	4	6	2
50–59 ,, ...	8	14	24	46	–	1	6	17	22
60–69 ,, ...	5	13	47	65	–	2	11	20	32
Totals ...	23	34	84	141	1	9	24	47	60
20 years and under	3	—	5	8	1	5	–	2	–
70 years and over	4	10	25	39	–	–	3	11	25
Grand Totals	30	44	114	188	2	14	27	60	85

**Grades of Breathlessness Grades* 1 *to* 5.

Grade 1 : No abnormal breathlessness.

Grade 2: Able to walk normally without breathlessness on the level but breathless on hurrying or climbing slight hills.

Grade 3 : Able to keep walking at own slower than average pace on level.

Grade 4 : Forced to stop for breath when walking at own slow pace on level.

Grade 5: Breathless on the slightest exertion such as washing or undressing.

CARDIO—RESPIRATORY CASES—DISTRIBUTION

Postal District	Number awarded points	Number awarded special priority	Number awarded transfers	Totals
1	—	—	—	—
2	—	—	—	—
3	—	1	8	9
4	6	2	6	14
5	6	11	15	32
6	3	8	20	31
7	4	5	20	29
8	3	9	19	31
9	1	1	2	4
10	—	—	—	—
11	—	—	3	3
12	—	—	1	1
13	2	1	5	8
14	—	—	3	3
15	3	5	2	10
16	—	—	—	—
17	—	—	—	—
18	—	—	—	—
19	2	1	—	3
20	—	—	—	—
21	—	—	—	—
22	—	—	—	—
23	—	—	—	—
24	—	—	4	4
25	—	—	2	2
26	—	—	2	2
27	—	—	—	—
28	—	—	—	—
Kirkby ...	—	—	2	2
Total	30	44	114	188

It is interesting to be able to report in practically every instance where an applicant was classified in Grade 5, i.e., breathless on the slightest exertion, rehousing was rapidly achieved.

Typical cases occurring during the year, which help to illustrate the way of approach to the problem, are as follows :—

A mother of four young children, living in an old terraced house with no bathroom nor internal water supply and a derelict toilet at the bottom of a yard, had been seriously affected for many years by rheumatic heart disease. In addition, her husband was suffering from duodenal ulceration. At the time of her application she was pregnant for the fifth time and was suffering from mitral stenosis and aortic regurgitation. She had previously had two operations on her mitral valve and required hospital treatment during the latter part of her pregnancy on account of severe vomiting. After her baby was born she was severely breathless and quite unable to cope with her children in her accommodation with steep narrow stairs. A special priority allocation was made and with an easier home to manage her condition improved considerably.

The father and mother of two girls, aged five and two years, were living in a small house with no bathroom, no internal water supply and an outside toilet at the bottom of a yard. Two rooms were unfit for habitation. The whole family were accommodated in a small front living-room. The younger daughter was severely mentally retarded and suffered from epilepsy. This family were rehoused to a house with a garden, thus providing more suitable facilities for the development of the handicapped child. Under their previous circumstances any attempt at the rehabilitation and training of the child would have been severely hampered.

A young man suffered a serious accident at work resulting in a broken neck with paralysis of four limbs. In spite of the severity of his injuries he made a reasonable recovery but was left with residual paralysis. This required the use of a wheelchair and mechanical aids in the home. At the time, his wife and young baby were living with her parents. The family were re-united in accommodation adapted to their especial needs with facilities for a wheelchair, situated near to relatives who were then able to provide help in caring for the disabled member.

An elderly couple were living in a very large house, falling into a derelict state since the owner could not afford to carry out the repairs required to keep the whole of the house habitable. The man, who was 78, was completely bedridden through heart failure following a coronary thrombosis. His wife, who was 68, was breathless on exertion and found it extremely difficult to get up and down stairs, requiring her to stop many times before she could manage just one flight. It was

impossible for the couple to sleep downstairs because the downstairs rooms were uninhabitable. Constant attention was required from the district nursing and welfare services. The couple were rehoused into a ground floor pensioners' flat, where the wife's condition improved as she was able to manage with less exertion, and they were able to keep warm for the first time for many years.

MEDICAL EXAMINATIONS

During 1967, it was decided that the Health Department should take over the medical examination arrangements for the Liverpool Fire Service and the Police Authority; the Liverpool and Bootle forces, having been amalgamated, are now known as the Liverpool and Bootle Constabulary. With this increase in the number of examinations in mind, the Health Committee agreed that a full-time Medical Officer should be appointed to supervise the work of this Section, and subsequently Dr. R. S. E. Cutcliffe took over these duties as Principal Medical Officer (Medical Examinations) on 1st June, 1967.

A total of 4,399 medical examinations of employees was carried out, which were of three types: (1) for entry into the Corporation service for officers, (2) for entry into the superannuation scheme for manual workers, and (3) by reason of extended sickness. In the latter type, the examination is carried out to determine:—

(*a*) whether the employee remains fit to continue in his existing employment;

(*b*) whether modifications will be required; and

(*c*) whether extension of sick pay is indicated or whether retirement is necessary.

Seventy-three candidates were examined on behalf of other local authorities. Of the examinations undertaken for the Corporation, 2,274 were for new appointments of officers, 1,533 for admission of manual workers to the superannuation scheme, 195 for extension of sick pay and 397 in consideration of the suitability of their present employment. Included in this figure were 63 Mersey Tunnel workers, who are given periodical examinations because of the nature of their work inside the tunnel and exposure to exhaust fumes, etc. There were no employees of the Water Engineer's Department needing special examinations during the year, because of working in compressed air in the shaft and tunnel under the Manchester Ship Canal.

The new arrangements for the Police and Fire Services involve the examination of recruits, both adult and cadet on new appointment, and the continued supervision of sickness cases and personnel involved in accidents both on and off duty and for pension purposes. Within the context of police medical examinations, there are also examinations of traffic wardens. In addition to the above, special examinations are carried out within the Fire Service of members undertaking breathing apparatus courses.

Many reports were obtained from doctors in hospitals and general practice. In consultation with the patient's general practitioner or

hospital consultant, it was decided after medical examination that 269 were permanently unfit to carry out the duties of their post and should be retired, 69 manual workers were found unfit for entry into the superannuation scheme, and 34 officers were medically unfit to take up new appointments, a total of 372 persons, being almost 8·5 per cent of those examined. A list of the medical conditions causing unfitness appears in the following table:—

Respiratory Diseases

Chronic Bronchitis	75
Tuberculosis	3
Bronchial Asthma	2
Lobar Pneumonia	1
	81

Cardiovascular Diseases

Valvular Heart Disease	8
Hypertension	40
Coronary Artery Lesions	37
Congestive Cardiac Failure	8
Deep Vein Thrombosis	1
Cerebrovascular Disease	16
Arteriosclerosis	3
Intermittent Claudication	1
Varicose Veins	7
	121

Psychiatric Diseases

Schizophrenia	6
Anxiety State	24
Psychotic Disease	13
	43

Carcinoma

Carcinoma Spine	1
Carcinoma Stomach	2
Genito-Urinary Carcinoma	6
Carcinoma Rectum	3
Carcinoma Bronchus	5
Carcinoma Brain	1
Secondary Carcinoma	2
	20

Nervous Diseases

Disseminated Sclerosis	3
Epilepsy	4
Facial Palsy	1
Parkinsonism	1
Muscular Dystrophy	2
	11

Alimentary Diseases

Intestinal Obstruction	1
Peptic Ulcer	8
Gastritis	2
Partial Gastrectomy	1
Enlarged Liver	2
Hernia	4
	18

Orthopaedic Conditions

Lumbar Spine	8
Osteoarthritis	14
Acute Rheumatism	11
Meniscectomy	1
Lumbago	1
Disc Lesion	1
Fractures and Injuries	8
	44

Genito-Urinary Diseases

Chronic Nephritis	4
Urinary Infection	3
Hydrocele	1
Prolapsed Uterus	1
Hysterectomy	1
	10

Other Conditions

Skin Disease	3
Obesity	4
General Debility	5
Thyrotoxicosis	2
Poor Vision	5
Diabetes	1
Deformities	3
Hypercalcaemia	1
	24

Travel Concessions

The Department also undertook, during the year, the examination of persons who applied for free passes for 'bus travel in the area under the terms of the Travel Concessions Act, 1964. This concerns persons who claim to be suffering from a leg disability of 35 per cent or more, and the examinations were held in order to assess the degree of disability. This brought about a great increase in the work of the section, and of 1,593 examined, 1,196 were granted passes.

Screening of Crossing Patrols

During the course of the year, 55 school crossing patrols underwent examinations, the major portion of which was devoted to testing the hearing and vision, including examination for restriction of the visual field. It is pleasing to report that, although many were referred to their general practitioners for treatment, only three were found to be unfit for this particular type of work.

Disabled Persons

The Department continued to make arrangements for disabled car drivers to be examined with a view to being issued with a Priority Badge for car parking, thus relieving the more serious cases of hardship and allowing them to park their vehicles and avoid walking. At total of 23 persons were seen and 18 priorities were granted.

Radiation Workers

During the year, twelve persons whose work brings them into contact with radioactive materials were examined, and as a result of special tests, were all found to be quite well.

Special Examinations

E.C.G examinations are made on all entrants to the service and for special cases, e.g., pension. Also vitalograph tracings are taken with all chest investigations.

Domiciliary Visits

When it is found impracticable to arrange attendance at Hatton Garden, a domiciliary visit is arranged. This can be regarded in the nature of welfare work. Regarding such work, every endeavour is made to arrange with the appropriate department for alternative employment when this is found to be necessary.

Staff

No section can work efficiently without the willing co-operation of its members. The nursing staff can take credit for their routine work and for the working of such specialised apparatus as E.C.G. and Vitalograph machines. Of course, the section relies very much on the administrative staff who see to the smooth running both inside and outside the section.

ENVIRONMENTAL HEALTH

General

The work in connection with slum clearance has continued throughout the year and the effects of this work, which has been speeded up since 1964, can readily be seen by the housing developments which are taking the place of premises dealt with under the provisions of the Housing Act, 1957. A total of 4,631 houses were represented as unfit for habitation. The large number of houses being represented has meant that inspectors have had to spend a considerable amount of time on work associated with the slum clearance drive as there has been a corresponding increase in the number of public inquiries.

Detailed inspections, under the Offices, Shops and Railway Premises Act, 1963, have continued to make good progress, 7,404 visits being made to registered premises during the year; a total of 5,593 infringements were dealt with.

The work in connection with the smoke control programme has continued to make progress but there has been a slowing down in the rate of conversion of firegrates to smokeless combustion.

Details of Visits

Inspectors visit houses to make enquiries following notifications of certain infectious diseases. The number of visits amounted to 1,345 and the number of enquiries regarding contacts was 106.

Investigations have continued in connection with ingestion disease enquiries and inspectors obtained information about contacts and modes of infection. The number of specimens submitted for bacteriological examination amounted to 5,155 from 2,405 persons, of which 1,384 from 571 persons proved positive.

There are thirteen registered common lodging houses in the City, twelve providing accommodation for 858 males and one providing accommodation for 95 females. The public health inspectors made 210 visits both day and night, resulting in notices being issued in respect of byelaw infringements and, on fifteen occasions, it was necessary to give the keepers a verbal warning. A total of 4,281 beds were examined and 2,152 beds and articles were found to be verminous, 2,134 being cleansed by the local authority and eighteen articles being destroyed under the supervision of the public health inspectors. During the year, it was necessary to arrange for the cleansing of 88 persons living in these houses.

Eight seamen's lodging-houses exist in the City, five of which are unlicensed and three licensed, under byelaws. These houses provide satisfactory accommodation for British seamen and other nationalities.

The total accommodation available is 790 beds, and public health inspectors made 39 day and night inspections. Infringements of the byelaws were reported on seven occasions, and the necessary action was taken to comply with the requirements of the legislation.

During the year 23 prosecutions were taken and the penalties and costs which were imposed amounted to £223 4s. 0d.

The weekly meeting of the Special Sub-Committee has enabled emergency action to be taken for the remedying of urgent defects. This procedure constantly reduces the period of time during which tenants can suffer discomfort.

Work in default of owners was carried out to 513 houses. The expenditure incurred is recoverable under the appropriate enactment.

A total of 42,149 requests was received for inspectors to visit premises and altogether a total of 248,511 visits and inspections was carried out under the various enactments and 13,809 notices were issued under the Acts and Regulations.

The Public Health Act, 1961, empowers the Corporation to clear drains after giving 48 hours' notice. Notices in respect of choked drains numbered 1,049 and it was necessary for the Corporation to clear 74 drains in default of the owners. The cost incurred will be recovered in accordance with the Act.

Defective drains cause rodent infestation, flooding and subsidence. Drainage systems tested to remove these problems numbered 1,100 and notices were issued in respect of 575 drainage systems which were found to be defective. In addition, choked or defective public sewers were referred to the City Engineer's Department for action under the provisions of Section 24 of the Public Health Act, 1936. The cost incurred will be subsequently recovered from the owners of the property involved.

Under the terms of faculties or licences issued from the Home Office, inspectors supervised the exhumation of five bodies during the year and the remains of two persons were shipped abroad. In addition, inspectors supervised the removal of remains from a disused burial ground which was being prepared for development purposes.

Other departments have co-operated by forwarding references in respect of matters requiring the attention of inspectors and 5,733 references were forwarded to other departments.

Canal Boats

During the year the Port Health Authority have carried out 30 inspections of canal boats within the Port Health Area. Two contraventions of the Public Health Act were found and both were remedied

satisfactorily. As a result of changes in transport which have taken place in recent years canal boats are not operating within the City area at the present time.

Sewerage

The details in connection with the sewerage and sewage disposal systems of the City were kindly provided by the City Engineer.

Liverpool covers an area of some 43 square miles and the drainage of the City falls naturally into three main drainage areas:

1. The Mersey Drainage Area which on a population basis deals with four-fifths of the City's drainage.
2. The North Sewage disposal Works Drainage Area which includes two-thirds of the remainder of the City.
3. The South Sewage Disposal Works Drainage Area accounting for the remaining third.

Dealing with the Mersey Drainage Area, the systems throughout are on a combined system and the flows discharge untreated to the river by means of 19 outfalls. These have recently been investigated with a view to submitting a report on screening and disintegrating the solids before discharge. A report has also been submitted on the question of instituting a separate system of sewerage throughout the drainage area and this has been approved in principle. Eventually over the years the problem of dealing with the grosser pollution of the Mersey by sewage discharges from the City will present an easier problem for solution.

With regard to the North Sewage Disposal Works Drainage Area, the Stage II extensions to the Works are nearing completion and improved conditions of discharge to the River Alt should now be in evidence. Similarly, at the South Sewage Disposal Works the present extensions are nearing completion and with the additional capacity the final effluent will show improved results.

Housing and Slum Clearance

The detailed inspection of sub-standard housing accommodation has continued throughout the year resulting in 4,631 houses, in 76 clearance areas, being classified as suitable for demolition having regard to the standard of fitness laid down in the Housing Act, 1957. Since the programme recommenced in 1947, a total of 35,396 houses have been represented as unfit for habitation and included in clearance areas or dealt with individually.

Houses numbering 3,385, in 42 clearance areas, were the subject of twenty compulsory purchase orders. Eighteen compulsory purchase

orders were submitted to the Minister of Housing and Local Government for confirmation and three clearance orders in respect of twenty houses were also made and submitted for confirmation.

Ten Public Inquiries were held involving a total of 3,090 houses in ten Orders, and during the year eighteen compulsory purchase orders involving 4,233 houses and one clearance order involving eighteen houses, were confirmed. Families rehoused, from houses included in confirmed compulsory purchase orders, numbered 3,303.

The Demolition and Closing Orders Sub-Committee dealt with a number of individual unfit houses under the provisions of Part II of the Housing Act, 1957, a total of 96 dwellinghouses being represented to the Sub-Committee as unfit for human habitation. These premises were occupied by 136 families.

The Sub-Committee considered the condition of 73 houses which included a number which had been represented the previous year. Of these, it was resolved that demolition orders be made in respect of eleven houses and closing orders in respect of 60 houses. In addition, 38 representations in respect of rooms and parts of premises occupied as separate dwellings which were unfit for human habitation were considered and in 36 cases it was decided that closing orders should be made. In one case an undertaking was accepted to make the premises fit for human habitation within a specified period, and in the remaining case a decision had not been made.

Following upon the rehousing of the occupants in premises subject to operative orders 27 houses were demolished and 45 were closed and sealed. In addition nineteen dwellings, being parts of premises, were also closed.

Premises were re-inspected where owners had carried out works as required to make premises fit for habitation and, as a result of the works undertaken, the Committee during the year rescinded eight closing orders and four undertakings.

Rent Act, 1957

A total number of 32,774 visits has been made by public health inspectors to dwellinghouses, under the provisions of the Rent Act, 1957, since the Act first became operative on the 6th July, 1957, and 9,111 applications for certificates of disrepair have been received. Some 3,262 tenants have applied for certificates as to the non-remedying of defects specified in undertakings given by landlords, and 2,614 applications have been received from owners for certificates as to the remedying

of defects in undertakings which they have given to tenants. Figures in 1967 were:—

Total number of applications for certificates of disrepair	116
Applications withdrawn	12
Number of notices served on landlords of the Local Authority's intention to issue certificates of disrepair (Form J)	104
Number of undertakings to carry out repairs received from landlords (Form K)	61
Number of certificates of disrepair issued to tenants (Form L)	32
Number of landlords who completed the repairs within the statutory period following the service of Form J	5
Number of applications (Form O) from tenants who have applied after owners have failed to comply with undertakings given (Form H or K)	6
Number of certificates (Form P) issued to tenants ...	5
Number of applications (Form O) from owners who have completed their undertakings	24
Number of certificates (Form P) issued to owners ...	24
Number of applications (Form M) received from owners for a cancellation certificate	28
Number of objections to cancellation received from tenants	8
Number of cancellation certificates issued	20

If the landlord is not satisfied that all the defects as listed on the certificate of disrepair are reasonable he has a right of appeal to the County Court. Similarly, the tenant can appeal if he does not accept the decision of the local authority regarding the cancellation of the certificate on the application of the owner.

Where premises are subject to a certificate of disrepair the tenant has a legal right to reduce the rent payable in respect of a dwellinghouse until all the works as specified on the certificate have been remedied satisfactorily. Likewise, if the owner fails to carry out the works as listed on the undertaking, within the statutory period of six months, the tenant is also entitled to reduce the rent payable until such time as the defects have been remedied to the satisfaction of the local authority.

Improvement Grants

During the year 640 houses were inspected following enquiries regarding improvement grants and of 190 formal applications for standard grants, 167 were approved. Applications were also made in 58 cases for discretionary grants and 59, which included several brought forward from the previous year, were approved.

Loans on Mortgage

During the course of the year, the City Council again considered applications for loans on mortgage from prospective owner/occupiers and 663 houses were inspected for this purpose.

Shops Acts, 1950 to 1965

The various aspects of the closing requirements for shops set out in these enactments have been given some detailed attention during the year. Whilst a strongly divided opinion still exists in all quarters as to the purpose and usefulness of these controls, complaints are received at frequent intervals regarding shops which are kept open after the normal closing hours, or on Sundays in contravention of the Shops Acts. These complaints require special investigations by inspectors who make observations, sometimes for prolonged periods under difficult conditions.

There have been new developments in this City in connection with Sunday trading. Certain traders in furniture and floor coverings have been opening their premises on Sundays, in some instances for the purpose of allowing the public to view the merchandise only. However, complaints have been received that retail sales are being made in these shops. Action by this department has established this to be true and successful court proceedings have resulted.

It is possible for retail establishments trading in non-exempted goods to be open on Sundays, and after week-day closing hours, provided they are not open for the serving of customers. This proviso is not defined in the Act and Divisional Court decisions have not assisted very much in guiding enforcement authorities as to what is meant by "closed for the serving of customers".

It is extremely difficult to obtain the evidence sufficient to take court proceedings in the cases which have been brought to the attention of this department, but there are now three prosecutions pending, one of them for a second offence. The penalties prescribed in the Act are quite inadequate, as they were enacted during the period 1912 to 1936. It is, therefore, quite impossible to deter certain offenders when the gain usually obtainable from trading in contravention of the law more than offsets the highest possible penalty.

It has been put on record many times by a number of authorities that the present Shops Acts are out-dated, but the problems associated with the repeal or revision of this legislation are numerous. It is extremely difficult to resolve the many issues affecting the varied trades and conditions, but action has to be taken to remove the serious anomalies and outmoded restrictions and, therefore, they should be dealt with as a matter of some urgency.

Two Bills have been prepared to deal with Sunday trading and trading hours generally. The one affecting Sundays is based on the recommendations of the Craythorne Committee, 1964, but it does not appear to be sufficiently in advance of the present law to claim much merit as an effective proposition. The other Bill is simple and very much to the point, being contained on one sheet of paper. It proposes

that all the week-day closing provisions of the present law be repealed and that the hours of employment of shop assistants be controlled.

The fish frying trade has also become more prominent in regard to Sunday trading. As in certain other trades new trends and demands are increasing and with the advent of the preparation of certain cooked meals in some of these establishments for consumption off the premises, the purchase on Sundays of these commodities together with fried fish and chips has created new problems of enforcement. The exemption from Sunday closing granted by the Fifth Schedule of the Act in respect of meals and refreshments does not include the sale of fried fish and chips from a fried fish and chip shop.

As the result of a number of complaints, this department has given guidance to fish friers as to the effect of the law upon their class of trade, and Court proceedings were instituted in certain cases. After earlier successes in the Court this department took proceedings in respect of two further investigations.

In both cases the defendants were charged that their shops were open on Sunday for the serving of customers with fried chipped potatoes in contravention of Section 47 of the Shops Act, 1950. The defendants were defended by a barrister and they pleaded not guilty. The Stipendiary Magistrates considered legal arguments on two contentions by the defence, that (*a*) the shops were not fried fish and chip shops on the day of the offence, and, (*b*) that the restriction imposed by the Fifth Schedule of the Act related to fried fish *and* chips and, therefore, if either fried fish *or* chipped potatoes were sold separately an offence had not been committed.

In respect of the first contention it was submitted, and evidence was duly given, that in the case of the first shop a large variety of cooked meals were prepared on the premises, and a printed list was issued by the trader advertising some 42 different cooked foods. It was, therefore, in their submission, not a fried fish and chip shop within the meaning of the term used in the Act.

In the second case the shop was more a traditional fried fish and chip shop from which was also sold a small number of other foods, mostly tinned or bottled. On the day in question the trader was not frying fish and only fried chipped potatoes could be purchased. Again it was suggested that at the time of the alleged offence the shop was not a fried fish and chip shop and, therefore, a contravention of the Act had not been committed.

Dealing with the exemption clause contained in the Fifth Schedule the defence further submitted that the words "fried fish and chips" meant just that, and not fried fish *or* chips. Therefore, if only

Nuisance from Noise — Measurement of Noise Level

Offices, Shops and Railway Premises Act — Modern Office

Licensed Club — Modern Premis

fried fish was sold, or fried chipped potatoes were sold on their own, then, the defence considered, such transactions were permissible.

The Stipendiary Magistrate, after some consideration of the facts in the case and the legal submissions, decided in favour of the defendants, in that he was of the opinion that the shops were not fried fish and chip shops at the time in question. However, he did not agree that the word "and" in the term "fried fish and chips" was conjunctive. He considered "and" in this context to be disjunctive, and that it would not be permissible to sell fried fish or fried chipped potatoes separately at a fried fish and chip shop.

This, of course, is only the decision of a local Court, but there are other factors which make this particular restriction in the Fifth Schedule seriously contradictory. The exemption provided by the paragraph under review whilst prohibiting the sale of fried fish and chips permits the sale of meals and refreshments. It is indeed a cause for concern that inspectors still have to spend so much time endeavouring to enforce such a contentious piece of legislation.

A total of 4,448 special visits were made to shops on Sundays, in the evenings and on early closing days and appropriate action was taken in respect of 185 infringements of the closing hours and other provisions. A further 12,015 inspections of retail shops of all classes, cafes, pet shops, warehouses, clubs, public houses and service establishments such as hairdressers, launderettes and repairing depots have been made during the year. These inspections include enquiries regarding the employment of assistants and their entitlements in respect of meal breaks, weekly half-holidays, compensatory holidays for work carried out on Sundays, and the hours of employment of young persons under 18 years of age, together with the examination of the appropriate notices and records.

Hairdressers and Barbers

There are now 781 registered hairdressers and barbers in the City. The number of new businesses registered during the year was 14 and there were 22 transfers of businesses to new owners. It is interesting to note that these changes usually occur in connection with ladies' salons, and whilst there are many reasons for such changes the pressures associated with this specialised class of trade must have a very considerable effect upon owners of businesses and upon employees.

An indication of the extent of this pressure is undoubtedly the difficulties which arise in certain establishments in providing adequate and undisturbed lunch and tea intervals for employees in accordance with the Shops Act, 1950. From time to time complaints are received about staff not having proper meal breaks and these are usually associated with the ladies' hairdressing trade.

Complaints are sometimes received about hairdressers not observing an early closing day each week, and some confusion may arise because of the six-day trading of shops, including ladies' hairdressers, in the central area of the City. This exemption, however, does not apply to hairdressers outside the City centre, but they are able to choose the most suitable week day on which to close their shops at 1 p.m., and indicate the day in an appropriate notice exhibited at the entrance to the shop.

During the year 46 infringements of the hygiene provisions of the Liverpool Hairdressers Byelaws were dealt with following inspections arising out of applications for registration or in connection with the Offices, Shops and Railway Premises Act, 1963.

Pet Animals Act, 1951

The number of pet animal dealers licensed during the year was 34 and 84 visits were made to their premises. Upon receipt of the notification from the City Treasury that an application has been made and the licence fee of ten shillings duly paid by the trader, a detailed inspection of the premises is made by a public health inspector in order to ensure the requirements of the Pet Animals Act, 1951, are fully observed. The Liverpool Fire Service also inspect the premises and any recommendations by them concerning fire prevention and appropriate action in case of fire are incorporated in the licence as special conditions.

Animal Boarding Establishments Act, 1963

In 1966 there were eight animal boarding establishments, but this year only five were licensed, and of these, four were premises of a society which accommodates only stray dogs or cats. The requirements of this enactment are very much the same as those of the Pet Animals Act and the Liverpool Fire Service also deal with the matters relating to fire precautions. The procedures of inspection and enforcement are also similar to those affecting pet shops, but in the case of animal boarding premises the proprietors are required to keep a register of all the relevant details concerning the boarding of the cats or dogs and these records are examined whenever the establishment is inspected.

There is a shortage of this form of accommodation as numerous enquiries have been received from people who have been unable to obtain facilities for boarding their animals.

Offices, Shops and Railway Premises Act, 1963.

The above enactment came into operation on the 1st May, 1964, and since that date until the end of December this year 20,542 general and incidental inspections of offices, shops, warehouses, service establishments such as hairdressers, cleaning and repair depots and catering premises have been made.

There are now 10,363 offices, shops and other premises registered with this department and of these, 656 were added during this year. Altogether 8,347, or 80·5 per cent of the registered premises have now received a detailed inspection, of which 3,630 were made in 1967. A further 3,774 additional visits were made making a total for the year of 7,404 visits for all purposes under this Act.

In spite of other special duties carried out during the year, an effort was made to increase the inspection rate for premises affected by this enactment. This was achieved, and the 3,630 general inspections made this year compares with 2,503 for 1966. Whilst the total number of infringements recorded during the year, 5,593, was less than those for 1966, the number of premises in which infringements were found was 1,474; 210 more than in the previous year.

The greater part of this work has been in the middle belt of the City and in certain suburban localities in which there is a predominance of shop premises. The experiences gained during the year in the field of health, welfare and safety do not appear to be of special significance. All the various aspects of enforcement have revealed much the same standards and conditions already found in previous years, except that the number of infringements in respect of the cleanliness of premises is lower than that for 1966. The total for the year was 861 compared with over 2,500 in 1966. This decrease is due mainly to the fact that many of the inspections during the year under this Act were of premises to which the Food Hygiene Regulations also apply and 1,226 contraventions relating to cleanliness were recorded under those regulations, making an overall total of 2,087.

The decrease in the number of cleansing contraventions appears to indicate that any improvement in the standard of cleanliness in the premises under review is due very largely to greater supervision of those premises by public health inspectors. This view is substantiated by the fact that follow-up inspections often necessitate renewed action by this department in respect of matters previously brought to the attention of the occupiers of certain premises, and one is reluctantly brought to the conclusion that Court proceedings are unavoidable in certain instances.

However, the co-operation of the vast majority of business people is readily acknowledged, and especially the many employers who provide and maintain excellent working conditions in advance of any legislative or departmental requirements.

Dangerous Machines

Accidents which were notified to this department during the year include eighteen in respect of dangerous machines. This was four more than in 1966. Four of these accidents occurred to young persons under

18 years of age and three accidents happened whilst machines were being cleaned; two of them to young persons.

It is gratifying that the number of accidents of this kind are relatively few, but one must feel that these notifications are not necessarily the real indication of the number of such accidents or the severity of them.

Accidents

Accidents, notified during the year, numbered 539, eight more than in 1966. A number of these were due to some personal fault of the victim. The greatest number, 133, of all the classes of accidents was associated with falls from one level to another (stairs, steps and ladders), and many of these occurred on steps from ground floor hatches to basement stockrooms. Many old shop and refreshment premises have extremely unsatisfactory arrangements for access to cellars, and considerable risk and discomfort is experienced by personnel who have to negotiate these usually steep, and sometimes defective and unguarded steps whilst carrying cases or packages. Appropriate action has been taken in every case where improvements were required, and, of course, occupiers of premises have fulfilled these requirements. It is, however, unfortuate that such action is so often neglected until someone is hurt and thereby prevented from carrying out their normal work.

It is regretted that one fatal accident was reported during the year. A youth, newly employed as a messenger and lift attendant, was killed when he, according to evidence given at the inquest, made an unauthorised use of a service lift in an office building. There were two gates in this lift, one of which was secured but not locked and intended only for use by lift engineers. It was possible for the lift to be stopped at a certain level for a person to step out on to a window recess in the lift shaft. The boy apparently did this, and subsequently climbed on to the top of the lift which was moved up to a higher level and then down again. It was during this period that the accident occurred. A verdict of misadventure was returned by the jury.

Demarcation of duties

The enforcement of the Offices, Shops and Railway Premises Act is the responsibility of three separate or "appropriate" authorities, namely, local authorities, fire authorities and H.M Inspectors of Factories. A senior officer of the latter department is appointed by the Minister of Labour, in accordance with the provisions of Section 57 of the Act, to advise local authorities when guidance is sought on questions of demarcation of responsibility or enforcement problems. The liaison between this department and the Ministry's inspector has been most effective, resulting in satisfactory and easily arranged consultations.

Report to the Minister of Labour

A detailed report of the year's work under this enactment is the subject of a separate and comprehensive document which has been submitted to the Ministry of Labour in accordance with their request that local authorities furnish the Minister with narrative reports in addition to the prescribed statistical return. The purpose of these reports is to assist the Minister to collate information on enforcement problems and weaknesses in the enactment or associated regulations, which may guide him in the event of amendments to any of the provisions.

The Adulteration of Food and Drugs

During the year, 3,406 samples of food and drugs were procured and analysed and, of this number, 72 or 2·1 per cent were found not to be genuine or otherwise irregular. Milk, being such a widespread and staple source of food supply must figure prominently in any sampling programme and 2,208 samples of milk were procured for analysis. Statutory action was taken in respect of fish cakes. Fines totalling £115 and £24 8s. 0d. costs were imposed.

Samples of ice cream, ice lollies and frozen confections submitted for chemical analysis or bacteriological examination numbered 155. A total of 108 ice cream samples were examined bacteriologically and 45 were found to be in Grade I, eighteen in Grade II, seventeen in Grade III and 28 in Grade IV. Samples in Grades III and IV are considered unsatisfactory and it is the usual practice to take further samples to see if the samples are consistently poor. Appropriate action was taken in respect of unsatisfactory samples and advice given to manufacturers concerning the proper cleansing and sterilisation of the processing plant.

In addition to the bacteriological examination of milk and ice cream, 110 samples of other foods were examined for their suitability for human consumption, including examination for food poisoning organisms. The foods selected were those to be eaten without further cooking and included meat products, sandwiches, cakes and shellfish. The results of examination generally were satisfactory.

Examination of Milk

Regular routine samples of milk were taken from processing plants and milk producers within the City and the standard of cleanliness and efficiency of pasteurisation continue to be satisfactory. The total number of milk samples submitted to the Public Health Laboratory for examination was 1,098, comprising 1,041 heat treated milks and 57 raw milks.

Of the 746 pasteurised milks, two failed the phosphatase test for efficiency of pasteurisation, in both cases the fault was immediately

rectified. In addition, 31 samples failed the methylene blue test for bacterial quality. Nineteen of these samples were obtained from automatic vending machines. Of the 243 sterilised milks, two failed the turbidity test and of 52 samples of Ultra High Temperature milk two samples failed the Colony Count test. In the latter instance the processing plant is located outside the City and the appropriate local authority was informed. Five methylene blue failures were reported from the 57 untreated milk samples taken and results of guinea pig inoculation of the milk tested for the presence of tubercle bacilli proved all samples were negative.

The milk supply to schools, hospitals and Corporation establishments is sampled regularly and 180 samples were tested chemically and bacteriologically. All samples proved satisfactory.

A small percentage of the milk supply of the City consists of untreated milk. Of the 57 samples of untreated milk all were specially tested for the presence of brucella abortus. These samples were procured from City herds and from farm bottled milk produced in outside areas. Positive results were obtained from one City herd, the milk from which was already heat treated before sale, therefore it was not necessary to serve a notice under the Milk and Dairies (General) Regulations, 1959. Notification of this result was forwarded to the Area Veterinary Officer of the Ministry of Agriculture, Fisheries and Food.

New registration certificates in respect of milk distributors and their premises numbered 132 and licences for the sale of designated milk were issued. A total of 1,724 visits was made. These visits revealed that 132 new registrations were required to be effected for dairies and milk distributors, 46 licences were to be transferred and 120 renewals were to be made. At the time these visits were made the public health inspectors ensured that the requirements of the Milk and Dairies (General) Regulations, 1959, were strictly complied with.

During the year, 532 visits were made to milk processing plants for the purpose of sampling when the installations were in operation. Special attention was paid to the temperature records and the functioning of the recording and indicating instruments.

Pasteurising plants in the City consist of three multiple, one single high temperature short time plant and one of the batch or holder type. In each instance the units are coupled to mechanical bottle washing plants, filling and capping machines and adequate cold room accommodation. There are also three milk sterilising plants in the City. The processing dairies continue to be well maintained and effective in operation.

The Liverpool Corporation Act, 1921, empowers the local authority to grant licences to all persons keeping cattle, subject to the

premises being of the required standard. There are thirteen cowsheds and fifteen piggeries in the City.

The Liquid Egg (Pasteurisation) Regulations, 1963, forbid the use of unpasteurised liquid egg with the object of preventing the ingestion of organisms capable of producing food poisoning in the consumer. There are no egg pasteurisation plants in the City, and eight samples were taken at bakeries during the year and submitted for the Alpha Amylase Test. All samples proved satisfactory.

During the year 40 samples of animal feeding stuffs and fertilisers were obtained from City mills for analysis. There were no major infringements of the principal Act. Twenty samples of animal feeding stuffs and other material were examined bacteriologically for the presence of Bacillus Anthracis. All samples proved negative.

Supervision of Food Supply

Close supervision of the food supply of the City has been maintained throughout the year. Public health inspectors have made daily visits to the Wholesale Fish Market, the Wholesale Fruit and Vegetable Markets at Queen Square and Cazneau Street and St. John's Retail Market. Certain difficulties have been experienced by traders in the Cazneau Street Market this year. The part closing of the market for the construction of the approach roads in connection with the second tunnel crossing has caused considerable difficulty in maintaining hygiene standards.

Routine inspection is carried out on poultry and game at the wholesale meat market prior to sale to the retail trade; 1,314 lbs. were rejected and destroyed as a result of these inspections, due mainly to decomposition.

An extensive retail fish and poultry trade throughout Merseyside is supplied by the wholesale market. Daily inspections at Stanley Fish Market resulted in the rejection of 14,490 lbs. of fish.

The daily examination of fresh fruit and vegetables at Queen Square, the North Market and at various wholesale warehouses in the City has been maintained and resulted in the rejection of 159,698 lbs. of fresh fruit and 282,779 lbs. of vegetables as being unfit for human consumption.

Daily visits have been made to a variety of food premises for the purpose of the inspection of canned goods and grocery sundries. A large proportion of rejected foodstuffs was disposed of at a Corporation controlled tip and smaller consignments were removed by the City Engineer's (Cleansing) Department and subsequently tipped under supervision.

The examination of canned goods and grocery sundries resulted in the rejection of 95,591 lbs. as being unfit for human consumption. In addition some 41,850 packages of frozen foods were rejected due to breakdown of refrigerator cabinets.

Details of the various categories of canned goods, etc., rejected are as follows:—

	lbs. wt.
Canned Meats	48,515
Canned Fruit and Vegetables ...	25,399
Canned Fish, Milk and Soups ...	3,877
Dry Groceries, etc.	17,800

The Merchandise Marks Acts and Orders in Council made thereunder lay down marking for certain imported foods and to ensure compliance with these Orders visits were made to provision merchants, butchers and greengrocers. Any infringements observed were rectified at once.

Investigations into 438 food complaints, originating from members of the public, were carried out in connection with foreign bodies or the question of nature, substance or quality of various foodstuffs. All complaints were thoroughly investigated and the complainants generally satisfied.

Meat Inspection

In the introductory remarks, the report on last year described it as exceptional. This year, 1967, will long be remembered as disastrous, with livestock and meat at unprecedented high price levels, and, from October, the scourge of the worst foot and mouth epidemic recorded.

Restrictions imposed on stock movement, the closing of auction markets, the stopping of Irish cattle imports, and a ban on the sale of imported South American meat, produced conditions which were without parallel in the meat trade. The true cost of the foot and mouth epidemic will never be accurately assessed, whole herds of the finest pedigree animals, particularly in the devastated counties of Cheshire and Shropshire, have been slaughtered and burned. The painstaking building up of stock—in some cases the whole of a farmer's life work—has been eliminated in a few hours.

The total number of animals slaughtered in Liverpool during the year was 389,508, and compared with 493,638 last year, there was a decrease of 104,130. These figures underline the effects of the foot and mouth epidemic, which started in October and was still raging at the end of December—the peak slaughter period of the year.

Animals Slaughtered

Details of the number of animals slaughtered during the year are as follows:—

Calves	Pigs	Sheep	Bullocks	Heifers	Cows	Bulls	Total
4,301	104,539	228,409	36,325	744	15,066	124	389,508

Diseased Conditions

Of the 389,508 animals slaughtered and inspected, 1,868 whole carcases were totally rejected as diseased and unfit for human consumption, together with part carcases from 9,434 animals. In addition, organs from 81,252 other animals were found to be diseased and rejected as unfit.

These figures indicate that 23 per cent of the animals slaughtered were found on post-mortem inspection to be diseased. This compares with 21 per cent in 1966. A summary of the reasons for condemnation is set out in the statistical appendix.

Meat Inspection Charges

The City Council decided in 1963 that charges for the inspection and stamping of carcases would be 2s. 6d. for a bovine animal (other than a calf), 6d. per sheep or lamb, and 9d. for each calf or pig. On this basis, the amount received by the Council for the inspection and stamping of 389,508 animals slaughtered in the City during the year was £16,324.

Diseased Meat and Offal—Disposal and Treatment

The amount of diseased meat and offal rejected was 427 tons; all this material was dealt with in the City Council's by-product plant within the abattoir, where it was rendered down and sterilised. The resultant inedible tallow was sold for industrial purposes, and the meat meal used for animal feeding stuff manufacture.

The meat traders as owners or agents are paid for this raw material, the weight and type of meat or offal being certified from the meat inspection records and payment made by the Markets Department.

Tuberculosis

The overall incidence of tuberculosis found during routine inspection of bovine carcases was, as last year, less than one per cent. In pig carcases, which last year showed 0·9 per cent, there was a slight drop to 0·7 per cent. The number of re-actor cattle, sent in for slaughter by the Ministry of Agriculture, Fisheries and Food under the eradication scheme, was eight cows. On post-mortem inspection, six carcases were

clear, and did not show any tubercular lesions. The lungs of one cow showed lesions, and in another, fairly extensive lesions of skin tubercle was found requiring rejection of part of the shoulder.

General Diseased Conditions—Sheep and Lambs

The general level of quality in sheep and lambs has only been average, really good quality lambs have been scarce and dear. Hill sheep and lambs were unusually poor, and at the back end of the year, the foot and mouth epidemic slaughter accounted for much of the stock normally marketed, which was burned on the farms.

The number of carcases wholly condemned during the year for diseased conditions was 1,083 together with part carcases from another 3,840, and organs, mainly livers, from a further 70,000 animals.

Calves

The number of calves slaughtered was 4,245, consisting mainly of small "bobbie" calves which breeders did not wish to rear. Carcases wholly rejected numbered 440 affected with acute enteritis or umbilical pyaemia, whilst part carcases from a further 225 animals were rejected mainly for injuries of the legs, pelvis or back, due to careless handling at livestock markets or during transit.

As it is impractical to feed calves satisfactorily at Stanley, arrangements have been made through the traders, that calves arrive from markets during normal working hours, and are slaughtered as soon as possible after arrival.

Cattle

Of the 52,259 cattle slaughtered consisting of 36,325 bullocks, 15,066 cows, 124 bulls and 744 heifers—a decrease of 1,044 on last year—the quality varied very much. There was less top grade beef of the best quality; much of the bullock beef was from barley fed animals which carry little fat and in the jargon of the meat trade only "eats once", meaning that this kind of beef is acceptable when cooked hot, but has a lack of flavour when eaten cold.

The demand for boneless cow beef for manufacture has continued at peak requirement and is a source of profit even at today's price level for livestock.

The number of carcases or offal found to be diseased at the time of slaughter and inspection was 8,675 out of the 52,259 bullocks, heifers, cows and bulls slaughtered, whole carcases condemned numbered 54, together with part carcases or offal from another 8,621 animals.

Pigs

The total number of pig carcases and offal inspected in Stanley Abattoir and at a private abattoir in the City was 104,539. The number of carcases found to be diseased at the time of slaughter was 8,239; the number totally condemned as diseased and unfit was 291, together with part carcases from a further 7,948 pigs. The incidence of tubercle in pigs was less than one per cent—0·7 per cent—the pyaemic infections—179—were considerably more than last year, and, through the wholesale traders dealing in pork, breeders were routinely notified. However, this exchange of information, vital to the breeder, cannot always be effective where pigs bought in auctions are concerned, as pigs from different breeders are indiscriminately mixed together before transport to the abattoir.

The Meat Market

Large quantities of frozen or chilled beef, mutton, lamb and offal (tails, kidneys, livers and hearts), sold daily on the market, are subject to inspection. Whilst most of this meat is in good condition, on occasions it was necessary to trim carcases of quarters for brine damage, mould and decomposition. Irish beef and lamb arrived in good condition and some of the best quality meat on sale in the market was from this source. The carcases were well dressed and efficiently inspected.

Some unusual consignments during the year were pig carcases from Finland, frozen cow beef from Rumania and frozen rabbit carcases from China. The quality of some of the carcase meat sent into the market from rural areas and the Border country was rather poor. In particular a number of the cow beef and calf carcases were found on re-inspection to be arthritic, oedematous, emaciated or enteric, and were condemned.

There was a steady and increasing sale of "tenderised" meat from animals killed in areas outside the City. These animals (bullocks) are injected with an enzyme solution, very shortly before slaughter. The activity of the enzyme supplements the enzymes already present in the meat and produces increased tenderness during cooking. The process has been introduced in the United States, Canada, Australia and some European countries. Carcases and meat dealt with in the market excluding the meat and offal from the 389,508 animals slaughtered in the City were as follows:—

Origin	Beef Hinds/Fores	Carcases Mutton/Lamb	Carcases of Pork	Carcases of Veal
Imported chilled or frozen	19,130	698,834	390	—
Slaughtered outside Stanley Abattoir ...	31,252	209,529	130,115	5,690

In addition to the above, 301,831 packages of meat, poultry and rabbits were handled.

Slaughtering Licences

During the year, 89 licences were granted by the City Council to slaughtermen, ritual cutters of the Shecita Board, and three Muslim ritual slaughterers. In addition, 26 licences were issued to Mohammedan seamen who slaughtered sheep in the abattoir, the carcase meat being destined for consumption by ship crews.

Pharmaceutical Raw Material

Various organs and glands, for example, pituitaries, thyroids, adrenals, ovaries, taken from healthy carcases after inspection, were collected and sent for processing for medicinal use. In addition, some 61 tons of distomatotic livers were sent for pharmaceutical manufacture.

Training Courses

The courses for those preparing for examination in meat inspection, food hygiene, and public health inspection were well attended. Forty-three students received instruction in the theory and practice of meat and food inspection together with the law relating thereto.

Specimens for Teaching Purposes

Requests for the supply of cysts, embryos, hearts, eyes, blood and pathogenic specimens for hospital laboratories, various departments of the University, schools and training colleges, have been met. In addition, specimens were provided for the examinations of the Royal Society of Health and the Public Health Inspectors Education Board.

Food Hygiene

In the report dealing with inspections under the Offices, Shops and Railway Premises Act, 1963, reference is made to the increase in the number of shop premises receiving attention under that Act for the purposes of ensuring adequate health, welfare and safety measures for persons employed in shops and similar premises. This work has enabled detailed attention to be given to the application of the Food Hygiene (General) Regulations, 1960, to all food premises, including those where the owner of the business works without employing assistants. These inspections have included the supervision of food premises for the purposes of securing clean food handling, packing, distribution and storage, and, in addition, all aspects of food hygiene in mobile shops and street traders' stalls have been dealt with under new regulations. The work connected with street trading, however, will be dealt with separately.

The total number of inspections of food premises for all purposes was 21,403 and 3,093 infringements of the Food Hygiene (General) Regulations, 1960, were dealt with by warning letters.

The departmental work under these regulations entails careful inspection of known businesses and the locating and the inspection of newly opened food premises. The latter part of this work means that careful systematic visitation is necessary in all parts of the City because persons opening new food businesses are not required by the regulations to notify the local authority of their intention to do so, nor is it necessary for them to register their business, except in the case of the sale or manufacture of ice cream, the sale of milk, or the preparation of meat products.

The effect of this is that food businesses may be started in insanitary premises or in the development of a mixed trades shop in which certain non-food commodities are sold, or where, perhaps, repair services are carried on. Regrettably, local authorities have not the power to cause these unsatisfactory ventures to be discontinued, and they must proceed through statutory action in the less serious cases, to immediate Court proceedings in the more serious instances.

It is now twelve years since the first food hygiene regulations came into force under Section 13 of the Food and Drugs Act, 1955, and very considerable effort has been made by this department to bring about an advanced standard of hygiene in all classes of food premises, and the results of this work are evident in the bright, newly equipped, clean shops throughout the City. Not only is this improvement to be seen in the shops and cafes where the public resort, but also in food factories, food warehouses, canteens and other establishments. A lesser part of this improvement is due to Court action found necessary in quite a number of cases. A very considerable degree of advancement has been obtained as the result of action by cautionary letters or schedules of works, and an important part has been accomplished through explanatory talks to food handlers in groups or individually, and interest talks to many organisations given outside normal working hours. In addition, there are now periodical courses of lectures conducted by this department at the University of Liverpool School of Hygiene in conjunction with the Royal Society of Health, in which specialised hygiene training is given to persons engaged in the catering and food retailing industries. These courses are attended by individuals or groups of personnel who are encouraged to attend by their employers who pay for the lectures and, if necessary, the examination fees.

Whilst this record of success must be emphasised in order to give due prominence to this important social and medical aspect of the work, it is not overlooked that there remains a very considerable task to be fulfilled. The department is seriously aware of the black spots in many

food establishments, not only in regard to premises and equipment but, more especially, the problem of the personal factor and the risks arising from unclean practices on the part of certain food handlers and others associated with the food trades.

With this problem in mind a new Food Hygiene Handbook has been prepared by this department and will be distributed during 1968 to establishments engaged in the retailing, catering, warehousing, manufacturing and distribution of food. This booklet will give essential information about bacterial and other contamination sources and the necessary safeguards to ensure safe food supplies. It is worded in a manner which will make it interesting to read and easy to understand, as an acceptable source of helpful information, and a practical aid to those who have little knowledge of this very important subject.

Inspections have been made of all the various classes of food establishments, and in connection with the registration of ice cream businesses. Thirty-nine new applications and nineteen transfers to new vendors have been approved and three applications in respect of the manufacture of ice cream were also received and approved.

Street Trading

On the 1st January, 1967, the Food Hygiene (Markets, Stalls and Delivery Vehicles) Regulations, 1966, became operative. The purpose of these new requirements was to remove the stalls from the limited provisions contained for their control in the Food Hygiene (General) Regulations, 1960, and to give wider and more effective powers in order to attain a much higher standard of hygiene than had been previously possible for this class of food trading. The new regulations are an endeavour to achieve, as near as is possible within the limits of a stall or vehicle, structural and equipment standards comparable with those required in premises.

In addition to dealing with structure and equipment the new regulations require the address at which the stall is garaged or kept to be displayed on the stall. This enables such places to be inspected and appropriate action taken, especially if the garage or store is also used for keeping stocks of foodstuffs.

Further requirements relate to water supply, hand washing facilities, first-aid materials and the provision of sinks in appropriate cases. Stalls in the open air, from which open food is sold other than raw vegetables, must be covered and enclosed on three sides, and adequate arrangements have to be made for the sorting out, separation and storage of unsound food. Satisfactory refuse receptacles shall be provided. Powers are given for the granting of exemption certificates in respect of the

requirements for water supply, washing facilities, first aid materials and sinks, subject to certain conditions meeting the approval of the local authority.

It is not anticipated that difficulties will arise in this City in dealing with markets, delivery vehicles and mobile shops because it is quite possible for these to provide the relevant facilities and maintain good standards of cleanliness, protection of open food, and facilities for hand washing, or sinks.

The major problems concern the street traders selling fruit from barrows parked in the City centre and in main thoroughfares in the suburbs. Barrows are of unsuitable construction, both in design and dimensions, and it is impossible for these units to be adequately adapted to comply with all the requirements of the new hygiene regulations. Some forty barrow traders have been located in various parts of the City and all have received warning letters advising them that their stalls do not comply with the regulations and inviting them to discuss with the department ways and means whereby they can perhaps deal with the various infringements. Court proceedings have now been instituted against a number of these traders and these cases will be dealt with early in 1968.

It is extremely difficult to deal with a class of trade which has traditional and certain unusual aspects which have gained for it a considerable public interest. Some of these traders have, perhaps, limited financial means and they would find it difficult to do all that will be necessary to comply with the new hygiene standards. It is for these reasons that time has been granted in order to enable them to adopt the changes involved, but only a few traders have made any attempt to seek guidance from this department. Therefore, subject to the decision of the Magistrates' Court in the cases already prepared, progressive action will be taken until all the unsatisfactory stalls have been dealt with in an appropriate manner.

Licensed Premises

During 1967, 21 applications under the Licensing Act, 1964, were received by the Clerk to the Justices for new club registration certificates. This department is notified of these applications by the Town Clerk, together with applications for variations in existing certificates where alterations or extensions are made to club premises or when clubs transfer to other addresses. The department is responsible for enforcing the various Public Health Act and Food Hygiene provisions in all club and other licensed or non-licensed premises, and for this reason inspections are made of premises used, or intended to be used, for any of these purposes. In most cases extensive works are required and schedules are sent to the secretaries or other responsible persons

giving detailed specifications relating to the provision, construction or modification of sanitary conveniences for persons frequenting or for staff, together with requirements associated with lighting, ventilation and the construction and equipping of kitchens, bars and dining areas. The cost of all the works prescribed by this department is many thousands of pounds and approval of the premises is not intimated to the Town Clerk until all the works are satisfactorily completed.

The Stipendiary Magistrate granted club registration certificates under this enactment to eighteen clubs and approved the renewal of certificates in a further eighteen cases. One registered club surrendered their certificate and three registration certificates were cancelled by the Courts. The total number of registered clubs at the end of the year was 300 and a further 81 clubs are subject to On Licences under Section 55 of the Licensing Act, 1964.

In addition to the clubs granted registration certificates under this Act, eight premises were inspected in connection with applications for Justices Licences to hold excise licences authorising the sale of intoxicating liquor. Approval was granted in respect of these applications.

There are now 183 off-licence premises for the sale of beer, wines and spirits, twenty restaurants are licensed for the sale of intoxicating liquor, and three premises are subject to residential restaurant licences.

Entertainment Clubs

The Liverpool Corporation (General Powers) Act, 1966, Section 18, became operative on the 1st May, 1967, for the purpose of requiring the registration with the local authority of any premises in the City used, whether occasionally or not, as an entertainment club by its members for the purpose of entertainment, dancing or the playing of games, but not including any premises which, in effect, are already regulated by other similar legislation. Registration or renewal of registration may be refused and registration may be revoked if the local authority consider the premises are not suitable with regard to lighting, sanitation, ventilation, safety, fire precautions, means of escape and fire fighting appliances. Conditions may be imposed on registration of the premises in order to ensure the maintenance of the prescribed facilities and to regulate the hours of opening and closing of the club to avoid undue disturbance to the residents in the neighbourhood.

Forms of application for registration are issued by the Town Clerk for completion by the club authorities and to be returned by them together with a fee of £1. On receipt of an application the Town Clerk notifies the Corporation departments concerned and supplies a copy of the application.

The department is responsible for the provisions of Section 18 relating to lighting, sanitation and ventilation, and specifications of the work necessary in any of the premises are sent to the responsible person, requiring them to complete the works before further consideration can be given to the application by the local authority.

During 1967, sixteen applications for registration were received and schedules were sent to the applicants detailing considerable items of work. In addition to dealing with the matters affected by the terms of Section 18 of this Act, inspections under the Food Hygiene (General) Regulations, 1960, were also carried out to ensure compliance with those provisions in the catering sections of the clubs. Of the sixteen applications received, fourteen were approved, one was not pursued by the applicant and one was received too late to be considered before the end of the year. Five of the certificates granted during the year were surrendered by the clubs after successfully applying for registration certificates under the Licensing Act, 1964.

Factories Inspection

Administrative details under Section 153 of the Factories Act, 1961, are given in the statistical appendix.

Detailed inspections are being carried out in every type of business premises throughout the City under the provisions of the Offices, Shops and Railway Premises Act, 1963, and close co-operation is maintained between the various local authority departments concerned and Her Majesty's Inspector of Factories. In food factories it is the practice to give advice to staff on personal hygiene in addition to any action which may be required under the provisions of the Food Hygiene (General) Regulations, 1960.

Outworkers

Visits were made to the small factories and dwellinghouses where outworkers operate and these were found to be in a satisfactory condition. The return of outworkers during the year was as follows:—

(1)	Number of outworkers during the year...	139
(2)	Number of returns received from other authorities ...	4
(3)	Number referred to the Medical Officer of Health of districts outside the City	—

Rag Flock and Other Filling Materials Act, 1951

The number of premises where rag flock is manufactured, stored or sold is as follows:—

(1)	Licensed to manufacture rag flock... ...	1
(2)	Licensed to store and sell rag flock ...	5
(3)	Registered for use of filling materials ...	62

The number of samples submitted to the prescribed analyst was nineteen. All the samples were found to conform to the requirements of the Act.

Agriculture (Safety, Health and Welfare) Provisions Act, 1956

Agricultural premises visited during the current year consisted of farms, smallholdings, markets and nursery gardens. There were no infringements under the above enactment and 110 visits were made.

Industrial Nuisances

Offensive Trades

The number of offensive trades in the central area decreased slightly, those remaining throughout the City are well established and continued observation is maintained in an endeavour to remedy quickly any accidental emission of foul smelling vapours and gases into the atmosphere, which occasionally occurs due to plant breakdown.

The number of complaints of offensive odours in business premises increased during the year. The causes have included dead rodents under floors or in partition walls, and overheated electrical equipment. In one instance the occupiers of a number of large buildings in the Central area complained of a very offensive odour which was prevalent both in the street as well as in the buildings. The source was eventually found to be due to unsatisfactory combustion in a furnace and the offensive fume was being discharged from a chimney which was low in relation to the height of the adjacent buildings.

Efficient extractor plant in factories using spraying equipment frequently results in complaints from residents concerning the discharge of fume into the atmosphere and this type of complaint appears to be on the increase as quite a number of problems associated with spraying operations have been investigated during the year.

Residents of dwellinghouses in one area petitioned the department concerning a dust nuisance from a large solid fuel depot opposite their dwellings. Certain remedial work has been completed but additional work is required as dust is still being blown about during periods of high wind.

Other complaints consisted of grit from inefficient solid fuel plants, fluff from driers in laundry cleaning plants and dust arising during the cleansing of stonework of large office buildings. The main dust problem in the City is still caused by the extensive demolition and redevelopment which is constantly in progress, both in the central area and in the outskirts. Contractors endeavour to minimise the dust nuisance by using mechanical road sweepers or spraying water on dry days and in other cases it has been possible to arrange for the work to be enclosed by suitable sheeting.

Noise

A considerable amount of time has been spent on the investigation into complaints about noise. Noise has been described as an unwanted sound, but, during the daytime the numerous sources of noise, including motor traffic, tend to blanket any particular noise source, and it is only late at night when traffic ceases that certain persistent noise becomes apparent to residents in the area. In many districts, factories are situated close to residential property and, in general, complaints do not arise unless a night shift is operated.

Investigation into complaints about noise involves inspectors being on duty very late at night and early in the morning as it has been found in practice that it is useless to commence investigations before 11.30 p.m. in connection with complaints about noise caused by factories operating during the night.

A problem arose in the south end of the City when a large manufacturing firm installed new equipment which was being operated throughout the night causing a nuisance to residents. The firm were very co-operative and obtained the services of acoustic specialists. These carried out an investigation and made recommendations to the firm who arranged for the modifications and silencing equipment to be completed at considerable expense. There are many such problems arising and it has been found that managements are always willing to carry out work to reduce the noise level but it is not easy to find a ready solution to many industrial noise problems.

In addition to complaints concerning industrial premises, investigations were also made concerning noise caused by dogs barking, dairymen dumping crates of milk in the early hours of the morning, and the slamming of car doors. It was particularly noticeable that with the increase in the amount of work involving the use of pneumatic drills there was a considerable increase in the number of complaints from occupiers of offices in the business area of the City.

Atmospheric Pollution

Smoke Control Orders

There are now 25 confirmed Smoke Control Orders covering some 19,000 acres of the City, of which nineteen involving some 65,000 dwellinghouses and 8,500 other premises are already operative. The Orders include the central area of the City and the wards of St. Michael's, Aigburth, St. Mary's, Speke, Allerton, Woolton, Childwall, part Arundel, Broadgreen and Church. The six Orders which are not yet operative cover the wards of part Picton, Croxteth, Gillmoss, Clubmoor, Pirrie and Fazakerley. These Orders involve a further 31,500 dwellinghouses and some 10,500 other premises.

Due to the present financial situation the operative date of two Orders has been postponed, namely, the No. 21 Area (part Picton), which was postponed from the 1st August, 1967, until the 1st September, 1968, and the No. 22 Area (Croxteth), which was postponed from the 1st September, 1967, until the 1st September, 1968.

There is no doubt that a considerable reduction in visible pollution has occurred in the areas covered by operative Smoke Control Orders, and many residents in these areas are conscious of this improvement as they quickly draw the attention of the department to premises where smoke is being emitted.

It is pleasing to note that the external fabric of many buildings in the City centre has been cleaned and the stonework renovated. It is anticipated that the reduction in atmospheric pollution will result in these buildings remaining clean for many years.

Industrial Problems

The problem of smoke emission from boilers and furnaces of industrial plant and central heating boilers has been reduced during the year. The majority of the installations have now been converted to modern smokeless appliances including gas-fired boilers and oil firing or improved mechanical stokers. Routine inspections and observations have been carried out and on a number of occasions it has been necessary to visit premises following the receipt of special complaints. Upon investigation it was found that, in the majority of cases, the emission of smoke had been due to a mechanical breakdown. Prompt investigation resulted in the necessary remedial action being taken and only on a very few occasions was it found necessary to issue a second warning to the company concerned.

Railways

The modernisation undertaken by British Rail has made further progress, as all main line trains within the City area are now served by locomotives other than coal burning locomotives. A small number of coal fired steam locomotives were still in use during the year at marshalling yards and depots, these are being replaced by diesel electric locomotives. British Rail are hoping to complete this modernisation by early 1968.

Measurement of Atmospheric Pollution

The measurements of smoke and sulphur dioxide are forwarded to the Ministry of Technology, Warren Spring Laboratory, to provide information for the monthly summary of observations which are published by the Ministry in connection with the "National Survey of Smoke and Sulphur Dioxide Recordings". In this connection the Health

Department have operated four stations for the measuring of atmospheric pollution; these are situated at Hatton Garden, Woolton, Cressington Park and Croxteth. In addition the Central Electricity Generating Board operated four measuring stations until the end of June, situated at Clarence Dock, Love Lane, Dunbabin Road and Rocky Lane, Liverpool, 16. The Central Electricity Generating Board considered their investigations to be completed as both local power stations are now oil fired and they did not deem it necessary to continue with their survey. The details of the recordings from the various stations are included in the Appendix.

New Installations

Plans, deposited with the City Building Surveyor, indicating that new chimneys were to be constructed, were examined and approval was given in sixteen cases and in another fourteen cases it was found necessary to increase the height of the chimney before the necessary approval could be given. Notification to instal new boilers or furnaces was received in respect of 85 installations, of which 65 detailed specifications were submitted and the necessary certificate of approval was issued in these cases.

Rodent Control

Duties of Local Authorities and Occupiers

It is the statutory responsibility of every local authority under the Prevention of Damage by Pests Act, 1949, to take steps to secure, as far as is practicable, that their district is kept free from rats and/or mice and to enforce the duties of owners and occupiers under its provisions. In Liverpool, dwellinghouses are disinfested free of charge and tenants are keen to report any evidence they may have seen or heard.

Practical assistance is also given to owners and occupiers of business premises and land, and this proves helpful because to rely solely on the enforcement of the provisions of the Act could lead to an increase in the rodent population. Where assistance is provided at places other than dwellinghouses a charge is made for the services rendered.

The demolition of many buildings in the City centre helped to cause an increase in the number of complaints received, but due to the continuous treatments of the sewers very few brown rat infestations were found in this area.

Systematic Survey

The rodent control staff examined 14,818 sites during the year in connection with routine survey and investigation of complaints and a

further 60,529 visits were made entailing operational work and re-examination of buildings and lands during or following treatments. The public health inspectors also made, in connection with other matters, 86,213 inspections under the Act.

Rodent Infestation

During the year, 4,568 sites were found to be infested, 1,861 by rats, 38 by rats and mice, and 2,669 by mice only and the majority were only slightly infested. Details are shown in the statistical appendix.

The sites principally affected were warehouses and factories within the dockside districts as may be expected, but with a continual fall in degree of infestation. The central areas of the City are maintaining a decrease in rat population as a result of the steps taken year by year.

The rat infestations found within the middle belt of the City were again mainly slight and for the main part confined to yards of dwellinghouses and public passages.

Development of agricultural land for new housing estates disturbed rats from their customary habitats causing them to infest buildings under construction.

Complaints relating to rats and/or mice to the total of 12,377, an increase of 748 over the previous year, were received and promptly investigated.

Of the 902 dwellinghouses affected by rats, 742 infestations were solely confined to the external parts of the premises.

It will be seen that the number of rat infestations decreased whilst the mouse infestations increased. A new treatment was started towards the end of the year to combat mouse infestations and early results show that the new rodenticide is likely to be of further assistance to people engaged in rodent control work.

Rodent Disinfestations

During the year 4,211 buildings and lands were disinfested from rats and/or mice. The demand for assistance from occupiers of business premises remains appreciable and 1,798 requests, an increase of 222 from the previous year, were received.

Of the 4,345 infestations and reinfestations remedied during the year, 4,043 were treated by the department's operators and, of these, 4,001 were cleared by the use of poisons and the remaining 42 were remedied by trapping only. The effectiveness of the rodenticides used is apparent when having regard to the number of infestations remedied on one poisoning treatment, being 2,875 out of a total of 4,001. Of the

others, 964 required two treatments, 146 three treatments and sixteen four or more treatments. The remaining 302 infestations were remedied by the occupiers or their contractors under the guidance and supervision of the rodent control inspectors or by the repair of defective drains.

It is estimated that at least 11,032 rats in buildings and on lands were destroyed during the year as a result of poisoning treatments; 980 dead rats were actually collected during operations and 391 were caught in traps.

The species of rats collected were 730 rattus norvegicus ("brown" or "common" rats) and 641 rattus rattus ("black" or "ship" rats). Of the rodents collected, 39 were sent to the Public Health Laboratory for examination and the remainder were burnt.

Although there is no reliable formula available for calculating the kill in relation to the poisoning of mice there can be no doubt that the number destroyed by this method is quite considerable when taking into account the large amount of poison actually consumed by mice, namely 12,268 ounces.

Rat Destruction in Sewers.

With the object of reducing the rat infestation of buildings and lands that may have its source from the sewer, treatments for the destruction of rats in sewers were applied during the year. The new rodenticide used is proving effective as the number of infested manholes is decreasing.

During the work of preparing sewer manholes for baiting it was necessary to refer to the City Engineer's Department 1,887 items of work that required attention before the treatments were applied for rat destruction. The items included the removal of rubbish from baiting points and clearing of choked or partially choked sewers.

Preventative Measures

During the year, 558 drain tests were held in connection with infestations, which resulted in 216 premises being found to have defective drainage systems and the necessary action was taken to have the drains repaired. Thirteen notices were served under the provisions of the Prevention of Damage by Pests Act, 1949, relating to premises for non-structural work. Once again it is pleasing to note that during the year it was not necessary to institute legal proceedings under the Prevention of Damage by Pests Act, 1949.

Pigeon Control

Feral pigeons do considerable damage to the fabric of buildings where they roost and they also foul the facade and approaches to

premises. The owners of businesses and the occupiers of dwellinghouses co-operated with the staff to reduce the feral pigeon population. The operational work carried out resulted in many pigeons being trapped and humanely destroyed and some feral pigeons were destroyed as a result of work carried out by private firms.

A total of 23,642 visits were made which resulted in 60,503 pigeons being humanely destroyed and 3,062 eggs were also destroyed. The number of birds caught by the department's staff was 47,846 and 12,657 with help from private firms. Since the inception of the sub-section in January, 1966, a total of 97,943 feral pigeons and 10,566 eggs have been destroyed.

It has been noticed that many people object to pigeons roosting on their premises but only a few are prepared to have any proofing works carried out. The work of pigeon control would be greatly eased if it was made an offence to feed feral pigeons in public places. No cruelty would occur as a result of this action as the birds would travel to find food.

DISINFECTION AND DISINFESTATION

The services provided for disinfection following infectious disease, and the disinfestation treatment for verminous conditions have continued to function in a similar manner to previous years.

Inspection of Premises for Verminous Conditions

The number of inspections performed during the year in connection with rehousing of families was 7,853. As a result of these inspections 1,064 dwellinghouses and the furniture or effects of 204 families were treated for verminous conditions.

Disinfestation of Other Verminous Premises

The full use of the services provided by the department for treatment of verminous premises has resulted in 5,196 inspections and 3,026 treatments being carried out, together with treatment of 152 business premises and a major infestation in a local hospital ward.

Disinfestation and Disinfection Station

The one station now in use at the Smithdown Road depot dealt with the following articles during the year:—

19,867 Verminous articles disinfested.

9,508 Infectious articles disinfested.

41 Infectious library books disinfested.

28,759 Articles for precautionary treatment.

501 Tons of miscellaneous goods for precautionary disinfection.

116 Male persons cleansed.

Disinfection of Infectious Premises

Following the incidence of infectious disease at home 319 premises were dealt with in the manner prescribed for terminal disinfection. In addition the Department was called in to carry out disinfection at two hospitals where outbreaks of infectious disease had occurred.

Miscellaneous Services

Incontinent Laundry Service

This service, which is continuing to expand, dealt with 29,936 calls during the year for the purpose of collecting or returning laundry to or from chronically ill persons in cases where, because of the nature of the illness, no other laundry arrangements could be made.

Home Nursing Equipment.

This is another rapidly expanding service which is administered by this section and during the year, 10,500 visits were made for the purpose of issuing or collecting items of equipment.

City Mortuary

This service works in close liaison with the office of the City Coroner. During the year the two attendants assisted at 487 post-mortems and 523 bodies were received.

Other Activities

Other activities of the section include:—

(*a*) Collection, repair and delivery of day nursery equipment and other items of furniture etc., belonging to the department.

(*b*) Transport of equipment on behalf of other sections of the Health Department.

(*c*) Provision of transport for Port Health personnel.

Staff

The staff employed consisted of:—

1 Chief Inspector	1 Shift Leader
1 Senior Inspector	17 Drivers
5 Inspectors	21 Disinfectors, etc.
1 Depot Assistant	1 Joiner
1 Foreman—Disinfecting Station	1 Boiler Attendant
1 Foreman—Depot	2 Mortuary Attendants
1 Storekeeper	

Vehicles

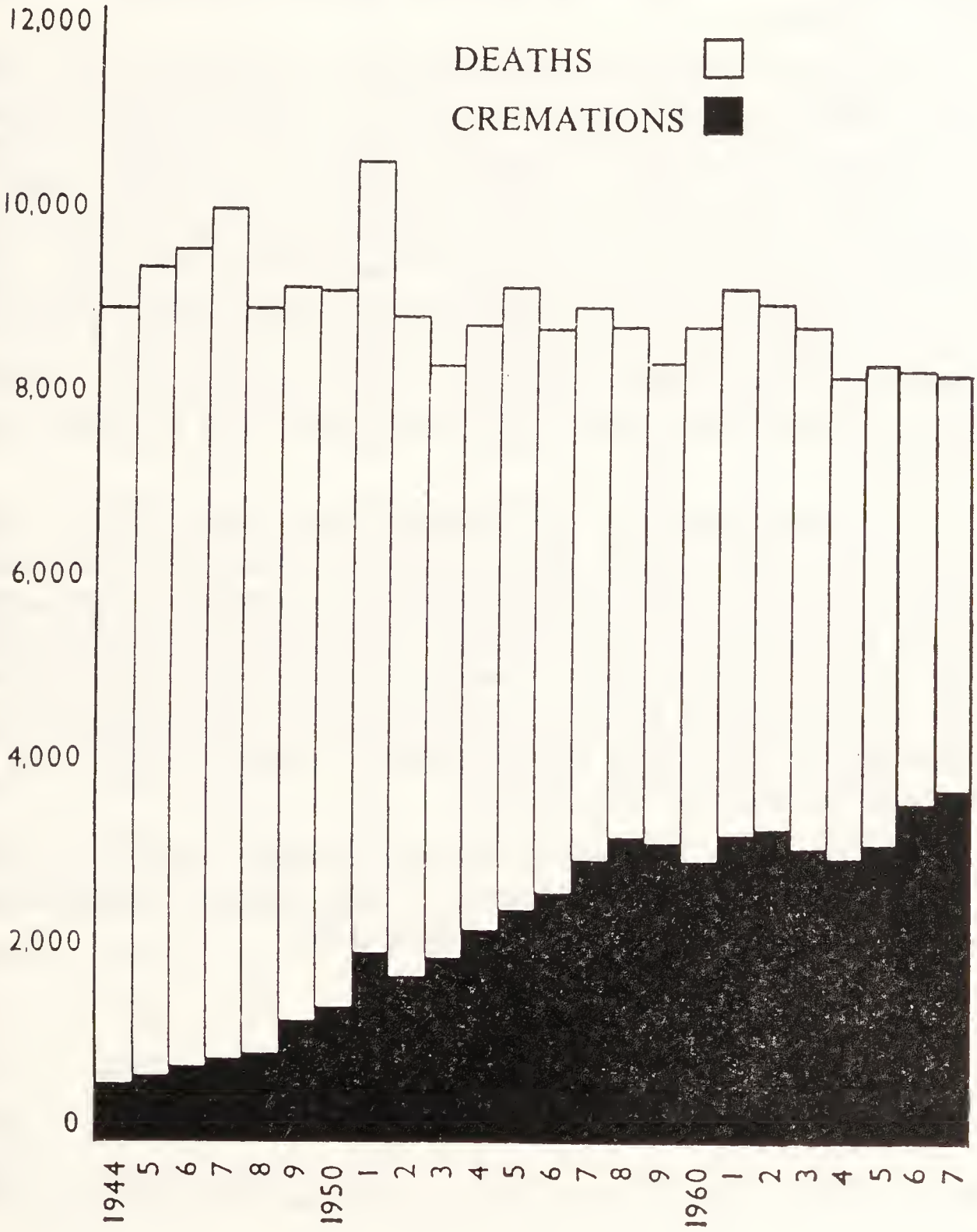
The vehicles used by the section covered 188,245 miles during the year and consumed 9,808 gallons of petrol.

CREMATION

The Medical Officer of Health continued to act as medical referee to the Liverpool Crematorium. The Deputy Medical Officer of Health and the Principal Medical Officer (Mental Health) and Principal Medical Officer (Epidemiology) acted as deputy medical referees. The documents, which are statutory, are scrutinised at the central offices of the Liverpool Health Department before authority is given to cremate.

The number of cremations carried out during the year at the Liverpool Crematorium was 3,575 which is a slight increase over the number undertaken during 1966. It is our opinion that the increase would have been greater had it not been for the fact that the two new crematoria in adjacent areas have now been operating since 1962 and another in the Thornton area since 1963. This fact, of course, has led to a slight decline in the figures up to the last three years.

No undue difficulties arose during the year in respect of sudden deaths occurring abroad where cremation was later carried out. Written formal requests for cremation to take place on death were received, as in former years, from several members of the public and these are filed for future reference in order that their wishes may be met.



WATER SUPPLY

The water supply in the area during 1967 was satisfactory both in quality and quantity but plumbo-solvency is being considered as indicated below.

There has been no form of contamination in which unusual action (i.e. other than the usual methods of treatment and distribution) has been taken.

The number of dwellinghouses, flats and shops with domestic living accommodation supplied from the public water mains in Liverpool was 205,697. None was supplied by a standpipe. The population of the City, as estimated by the Registrar General for the 30th June, 1967, was 705,310.

Six samples of water from the aqueducts and distribution system were examined for fluoride content. The average amount of fluoride, expressed as F, in these samples was 0·09 p.p.m., the range being from 0·05 to 0·15 p.p.m.

During the year 1967, bacteriological examinations were made on 3,578 samples of water from the aqueducts, wells, storage reservoirs. trunk mains and the distribution system. Of the 3,578 samples, 544 were taken within the City from the two wells and from sampling points on the mains other than the trunk mains. Of the 544, 95 per cent were free from B.Coli, and 76 per cent were free from coliform organisms. Also, of the 3,578 samples 1,683 were taken from the trunk mains which serve the City and other parts of the area of supply. Of the 1,683, 98·3 per cent were free from B.Coli. and 95·5 per cent were free from coliform organisms. Also, 72 chemical analyses were made and the results were satisfactory.

For plumbo-solvency 286 analyses were made. The average amount of lead absorbed in those samples of water that had passed through test lengths of lead piping was ·08 parts per million. The supplies from both Rivington and Lake Vyrnwy were treated with hydrated lime in order to raise the pH value. Towards the end of the year there was correspondence with the Ministries of Health and of Housing and Local Government about "Lead in Drinking Water" and the subject was still being studied at the end of the year.

With regard to fluoridation of water supplies, the City Council in 1965 decided again not to proceed in the matter. No further consideration was given to this subject during 1967.

STATISTICAL SECTION

VITAL STATISTICS

BIRTH STATISTICS—1944-1967

1967	LIVE BIRTHS			STILLBIRTHS		
	Males	Females	Total	Males	Females	Total
Legitimate ...	5,804	5,483	11,287	111	83	194
Illegitimate ...	674	622	1,296	13	16	29
Total	6,478	6,105	12,583	124	99	223

Year	Live Births	Birth Rate	Registered Stillbirths	Total Births	Stillbirths per 1,000 Live and Stillbirths	Illegitimate Live Births	
						No.	% of Live Births
1944	15,412	23·1	492	15,904	30·9	1,274	8·3
1945	14,784	21·7	431	15,215	28·3	1,582	10·7
1946	18,528	25·2	539	19,067	28·3	1,351	7·3
1947	19,904	26·4	514	20,418	25·2	1,151	5·8
1948	17,695	22·3	479	18,174	26·3	1,009	5·7
1949	16,551	20·7	358	16,909	21·2	943	5·7
1950	16,110	20·1	375	16,485	22·7	968	6·0
1951	15,593	19·9	396	15,989	24·8	859	5·5
1952	15,839	20·0	400	16,239	24·6	876	5·5
1953	16,022	20·3	394	16,416	24·0	873	5·4
1954	15,742	20·5	400	16,142	24·8	847	5·4
1955	15,268	19·6	408	15,676	26·0	785	5·1
1956	15,944	20·6	394	16,338	24·1	801	5.0
1957	16,044	20·9	409	16,453	24·9	854	5·3
1958	15,662	20·5	413	16,075	25·7	799	5·1
1959	15,615	20·6	375	15,990	23·4	815	5·2
1960	15,961	21·1	377	16,338	23·1	868	5·4
1961	16,492	22·1	380	16,872	22·5	946	5·7
1962	16,479	22·1	333	16,812	19·8	1,020	6·2
1963	15,775	21·3	351	16,126	21·8	1,095	6·9
1964	15,625	21·4	283	15,908	17·8	1,199	7·7
1965	14,553	20·2	269	14,822	18·1	1,197	8.2
1966	13,557	19·0	277	13,834	20.0	1,250	9.2
1967	12,583	17·8	223	12,806	17·4	1,296	10·3

PERCENTAGE OF ILLEGITIMATE LIVE BIRTHS TO TOTAL LIVE BIRTHS

COMPARISON OF LIVERPOOL RATES WITH RATES FOR ENGLAND AND WALES

	Liverpool	England and Wales
1930	4·6	4·6
1931	4·6	4·4
1932	4·5	4·4
1933	4·3	4·4
1934	4·4	4·3
1935	4·3	4·2
1936	4·4	4·1
1937	4·4	4·2
1938	4·8	4·2
1939	4·4	4·2
1940	4·6	4·3
1941	6·2	5·4
1942	6·3	5·6
1943	7·1	6·4
1944	8·3	7·3
1945	10·7	9·3
1946	7·3	6·6
1947	5·8	5·3
1948	5·7	5·4
1949	5·7	5·1
1950	6·0	5·1
1951	5·5	4·8
1952	5·5	4·8
1953	5·4	4·7
1954	5·4	4·7
1955	5·1	4·7
1956	5·0	4·8
1957	5·3	4·8
1958	5·1	4·9
1959	5·2	5·1
1960	5·4	5·4
1961	5·7	6·0
1962	6·2	6·6
1963	6·9	6·9
1964	7·7	7·2
1965	8·2	7·7
1966	9·2	7·9
1967	10·3	8·4

Deaths From Principal Causes—1967

Class	Cause Group No. (List A).	Cause	Male	Female	Total	Rate per 1,000 Population	Percentage of Total Deaths
II	44–48, 51–60	Cancer (except respiratory system) ...	519	684	1,203	1·71	14·76
II	49, 50	Cancer (respiratory system)	403	100	503	0·71	6·17
VI	70	Vascular lesions of central nervous system	381	575	956	1·36	11·73
VII	80–82	Heart Diseases ...	1,194	1,206	2,400	3·40	29·46
VII	79, 83-86	Other Circulatory Diseases	169	232	401	0·57	4·92
VIII	89–91	Acute and Broncho-Pneumonia ...	292	404	696	0·99	8·54
VIII	92, 93	Bronchitis	401	144	545	0·77	6·69
IX	98–107	Digestive Diseases ...	107	106	213	0·30	2·61
XIV & XV	127–135	Malformations and Diseases of Early Infancy	127	87	214	0·30	2·63
XVII	138–150	Accidents, Poisonings and Violence ...	200	189	389	0·55	4·77
Various	Remainder	All other causes ...	331	297	628	0·89	7·71
Totals		All causes	4,124	4,024	8,148	11·6	100

DEATHS FROM CANCER 1967 (CLASS II)

Cause Group No. (List A).	Organs affected	Male	Female	Totals
44	Buccal cavity and pharynx	16	6	22
45–48	Oesophagus, stomach, intestines and rectum	251	230	481
49, 50	Larynx, trachea, bronchus and lungs	403	100	503
51	Breast	*4	158	162
52, 53	Cervix and uterus	—	53	53
54-57	All other sites	199	193	392
58	Leukaemia and aleukaemia	14	16	30
59	Lymphosarcoma	25	20	45
60	Benign or unspecified neoplasms	10	8	18
	Totals	922	784	1,706

*Sex has been checked for these cases, and is correct.

TRENDS OF MORTALITY
1945–67

	Deaths from Cancer of the Respiratory System	*Deaths from Tuberculosis of the Respiratory System*
1945	160	605
1946	234	579
1947	235	599
1948	252	630
1949	320	532
1950	331	481
1951	334	406
1952	346	269
1953	432	258
1954	383	232
1955	408	185
1956	448	137
1957	448	123
1958	399	109
1959	444	102
1960	457	81
1961	525	80
1962	484	74
1963	483	54
1964	527	38
1965	493	42
1966	528	46
1967	503	44

MATERNAL MORTALITY—1930-1967

Year.	Births Registered			Maternal Mortality	
	Live Births	Stillbirths	Total Births	Deaths	Rate per 1,000 Total Births
1930	18,881	774	19,655	75	3·81
1931	18,626	722	19,348	55	2·84
1932	18,149	827	18,976	51	2·69
1933	16,929	680	17,609	60	3·41
1934	17,593	685	18,278	51	2·79
1935	17,347	749	18,096	59	3·26
1936	17,403	708	18,111	64	3·52
1937	16,728	618	17,346	40	2·31
1938	16,175	639	16,814	33	1·96
1939	15,614	631	16,245	29	1·86
1940	15,016	519	15,535	31	2·01
1941	13,291	508	13,799	32	2·42
1942	13,729	552	14,281	34	2·38
1943	14,432	485	14,917	34	2·27
1944	15,412	492	15,904	31	1·95
1945	14,784	431	15,215	23	1·51
1946	18,528	539	19,067	19	0·99
1947	19,904	514	20,418	17	0·83
1948	17,695	479	18,174	14	0·77
1949	16,551	358	16,909	9	0·53
1950	16,110	375	16,485	7	0·42
1951	15,593	396	15,989	10	0·62
1952	15,839	400	16,289	7	0·43
1953	16,022	394	16,416	5	0·30
1954	15,742	400	16,142	8	0·49
1955	15,268	408	15,676	9	0·57
1956	15,944	394	16,338	7	0·43
1957	16,044	409	16,453	7	0·42
1958	15,662	413	16,075	4	0·25
1959	15,615	375	15,990	5	0·31
1960	15,961	377	16,338	5	0·31
1961	16,492	380	16,872	2	0·12
1962	16,479	333	16,812	5	0·30
1963	15,775	351	16,126	4	0·25
1964	15,625	283	15,908	3	0·19
1965	14,553	269	14,822	1	0·067
1966	13,557	277	13,834	—	—
1967	12,583	223	12,806	1	0·078

Infant Mortality 1967

Deaths from stated causes at various ages under one year.

Cause of Death	I.C.D. No.	Under 1 week	7–27 days	1–6 months	7–11 months	Total Deaths under 1 year
Meningococcal Infection ...	057	—	—	—	—	—
Measles	085	—	—	—	—	—
Pneumonia	490-493, 763	3	3	27	4	37
Bronchitis	500–502	—	1	13	1	15
Enteritis	571, 572	—	—	8	—	8
Malformation	750–759	27	10	11	5	53
Injury at Birth	760, 761	14	—	—	—	14
Infections of Newborn ...	764-768	2	3	—	—	5
Other Diseases of Early Infancy	762, 769-776	108	3	1	—	112
Other causes	—	10	4	13	6	33
Totals		164	24	73	16	277

Live Births in the year ... Legitimate 11,287
Illegitimate 1,296

Deaths ... ... Legitimate Infants 244
Illegitimate Infants 33

Causes of Death—1967

(This table relates to underlying primary causes of death, as in previous annual reports).

Class	Male	Female	Total	Rate per 1,000 Population	Percentage of total deaths
I—Infectious and Parasitic Diseases	54	23	77	0·11	0·95
II—Neoplasms	922	784	1,706	2·42	20·94
III—Allergic, Metabolic Diseases etc.	33	63	96	0·14	1·18
IV—Diseases of the Blood ...	15	20	35	0·05	0·43
V—Mental and Psycho-neurotic Diseases ...	35	11	46	0·07	0·57
VI—Diseases of the Nervous System	419	607	1,026	1·45	12·59
VII—Diseases of Circulatory System	1,363	1,438	2,801	3·97	34·38
VIII—Diseases of Respiratory System	745	587	1,332	1·89	16·35
IX—Diseases of Digestive System	107	106	213	0·30	2·61
X—Diseases of Genito-Urinary System ...	74	47	121	0·17	1·49
XI—Diseases of Pregnancy ...	—	1	1	0·00	0·01
XII—Diseases of Skin	3	5	8	0·01	0·10
XIII—Diseases of Bones ...	8	18	26	0·04	0·32
XIV—Congenital Malformations	36	40	76	0·19	0·93
XV—Diseases of Early Infancy	91	47	138	0·20	1·69
XVI—Senility and Ill-defined Diseases	19	38	57	0·08	0·70
XVII—Accidents, Poisoning, and Violence	200	189	389	0·55	4·77
Totals	4,124	4,024	8,148	11·6	100

Analysis of Causes of Infant Mortality in Successive Quinquennia 1896-1965, and the years 1966

Years	1 Total Live Births	2 Total Deaths Under 1 Year of Age	3 Infectious Diseases (excluding Tuberculosis)	4 Tubercular Diseases	5 Nervous Diseases	6 Respiratory Diseases	7 Digestive Diseases (including Diarrhoea)	8 Malformations Premature Birth, Marasmus &c.	9 Exter Caus
1896/1900	111,700	21,160	1,508	698	2,476	3,575	6,376	5,698	81
1901/1905	118,801	20,353	1,546	644	2,516	3,484	5,187	5,732	56
1906/1910	118,313	17,739	1,613	465	2,052	3,146	3,902	5,520	53
1911/1915	111,872	15,458	1,309	345	1,432	2,916	3,635	4,953	42
1916/1920	99,451	11,510	1,116	202	1,083	2,821	1,872	4,107	17
1921/1925	104,217	10,497	1,066	200	573	2,776	1,786	3,764	12
1926/1930	95,701	9,002	978	109	401	2,553	1,670	2,981	8
1931/1935	88,644	7,904	902	82	368	2,050	1,184	3,125	6
1936/1940	80,936	6,226	573	74	519	1,457	698	2,691	8
1941/1945	71,648	5,512	341	71	403	1,704	548	2,193	13
1946/1950	88,788	5,034	311	47	213	1,109	963	2,226	11
1951/1955	78,464	2,626	83	10	28	480	132	1,792	6
1956/1960	79,226	2,149	31	—	24	384	82	1,576	3
1961/1965	78,924	2,006	19	2	20	409	83	1,406	5
1966	13,557	308	1	—	5	61	17	210	1
1967	12,583	277	1	—	6	55	16	189	1

Since 1962 the columns have included the following classes:—

Column 3: Class I less Tuberculosis.
„ 5: Class VI.
„ 6: Class VIII, with the addition since 1965 of ICD. No. 763 (Pneumonia of Newborn).—
„ 7: Class IX.
„ 8: Classes XIV and XV less (since 1965) ICD. No. 763.
For 1967 all causes not given in the other columns have been included here.
Column 9: Class XVII.

Deaths from certain Groups of Diseases in each decade from 1871 *to* 1960, *and during the separate years* 1961-1967

Years	(a) Infective diseases (less Diarrhoea, Influenza and Tuberculosis)	(b) Tubercular diseases	(c) Respiratory diseases (including Influenza)	(d) Digestive diseases (including Diarrhoea)	Total Deaths from (a), (b), (c) & (d)	(e) Cancer	Total Deaths from all causes
1871-1880	27,205 (19·2)	19,869 (13·5)	29,763 (20·2)	14,747 (10·0)	91,584 (62·9)	2,015 (1·4)	147,005
1881-1890	19,748 (14·1)	17,870 (12·7)	32,507 (23·2)	13,186 (9·4)	86,311 (59·4)	2,820 (2·0)	146,195
1891-1900	13,515 (9·3)	16,714 (10·8)	35,819 (24·6)	18,491 (12·7)	84,539 (57·4)	4,223 (2·9)	145,522
1901-1910	13,967 (8·6)	16,054 (10·6)	32,995 (21·8)	18,163 (12·0)	81,179 (53·0)	6,480 (4·3)	150,962
1911-1920	10,417 (7·9)	14,946 (10·9)	36,480 (27·3)	12,282 (8·9)	74,125 (55·0)	7,603 (5·5)	137,323
1921-1930	7,831 (6·6)	12,664 (10·7)	29,447 (25·0)	8,184 (6·9)	58,126 (49·4)	9,852 (8·4)	117,756
1931-1940	6,473 (5·6)	9,413 (8·1)	18,196 (15·7)	5,987 (5·2)	40,069 (34·7)	12,619 (10·9)	115,632
1941-1950	2,645 (2·6)	6,987 (7·1)	15,728 (15·9)	4,328 (4·4)	29,723 (30·1)	13,265 (13·7)	98,347
1951-1960	621 (0·7)	2,063 (2·2)	15,315 (16·8)	2,570 (2·8)	20,569 (22·5)	15,986 (17·7)	90,642
1961.....	25 (0·3)	86 (0·9)	1,888 (20·4)	229 (2·5)	2,228 (24·1)	1,708 (18·4)	9,262
1962.....	29 (0·3)	81 (0·9)	1,774 (19·4)	205 (2·2)	2,089 (22·8)	1,719 (18·8)	9,162
1963.....	31 (0·3)	58 (0·7)	1,641 (18·4)	224 (2·5)	1,954 (21·9)	1,573 (17·7)	8,908
1964.....	22 (0·3)	41 (0·5)	1,368 (16·7)	171 (2·1)	1,602 (19·6)	1,720 (20·9)	8,191
1965.....	17 (0·2)	43 (0·5)	1,288 (15·5)	194 (2·3)	1,542 (18·6)	1,727 (20·8)	8,300
1966.....	12 (0·1)	51 (0·6)	1,360 (16·4)	204 (2·5)	1,627 (19·6)	1,657 (20·0)	8,295
1967.....	28 (0·3)	49 (0·6)	1,332 (16·3)	213 (2·6)	1,622 (19·9)	1,706 (20·9)	8,148

Figures in parenthesis indicate the percentage of total deaths from all causes (Proportionate Mortality).

Since 1962 the columns have included the following classes:—

Column (a) Class I less Tuberculosis
„ (c) Class VIII.
„ (d) Class IX.
„ (e) Class II.

Name of Authority	Birmingham	Bradford	Bristol	Cardiff
Registrar-General's estimated population for 1967	1,101,990	296,860	429,020	289,320*
Comparability factor—				
(*a*) Births	0·99	1·04	1·03	0·99
(*b*) Deaths...	1·13	0·98	0·94	1·10
Crude birth rate per 1,000 population	19·09	19·03	16·3	16·7
Birth rate as adjusted by factor	18·90	19·79	16·8	16·6
Crude death rate per 1,000 population	10·80	12·79	11·8	10·9
Death rate as adjusted by factor	12·20	12·53	11·1	11·9
Infant mortality rate per 1,000 live births ...	19·80	28·32	16·8	21·2
Neonatal mortality rate per 1,000 live births ...	13·59	15·40	12·3	13·1
Stillbirth rate per 1,000 total births	16·27	17·35	12·8	13·6
Perinatal mortality rate per 1,000 total births ...	28·29	29·74	23·4	24·0
Maternal mortality rate per 1,000 total births ...	0·37	—	—	0·21
Tuberculosis rates per 1,000 population				
(*a*) Primary notifications—				
Respiratory	0·48	0·57	0·158	0·27
Non-respiratory	0·11	0·14	0·035	0·06
(*b*) Deaths—Respiratory	0·03	0·02	0·033	0·05
Non-respiratory	—	0·006	0·002	0·004
Death Rates per 1,000 population from—				
Cancer (all forms including leukaemia and aleukamia)	2·30	2·39	2·454	2·36
Cancer of Lungs and Bronchus	0·62	0·67	0·671	0·56
Meningococcal infections	—	0·003	0·002	0·004
Whooping Cough	—	—	0·002	—
Influenza	0·02	0·017	0·007	0·007
Measles	—	—	0·002	—
Acute Poliomyelitis and Encephalitis	—	—	—	—
Diarrhoea (under 2 years)	0·017	0·044	0·005	0·007
Diarrhoea (under 2 years) (per 1,000 live births)	0·62	2·30	0·286	0·42

*Indicates a change of boundary during the year.

RATES, ETC., OF A NUMBER OF THE LARGER AUTHORITIES FOR 1967

Kingston upon Hull	Leeds	Leicester	Liverpool	Manchester	Newcastle upon Tyne	Nottingham	Sheffield
295,900	507.780	282,800	705,310	616,520	251,650	309,740	534,100
0·97	1·00	1·04	0·98	1·05	1·00	0·99	1·02
1·21	1·11	0·98	1·14	1·08	1·09	1·05	1·04
18·90	16·9	18·62	17·8	18·34	15·39	18·41	17·0
18·32	16·9	19·36	17·4	19·26	15·39	18·23	17·3
10·67	11·6	11·71	11·6	12·57	11·95	11·48	11·4
12·91	12·9	11·48	13·2	13·58	13·04	12·05	11·8
28·4	22·4	21·26	22·0	22·8	24·01	19·82	19·1
15·19	15·3	15·38	14·9	14·33	16·01	11·93	13·7
14·28	16·5	16·62	17·4	19·60	18·25	16·39	13·2
27·14	29·4	30·25	30·2	32·5	30·67	26·05	24·6
0·18	0·34	—	0·078	0·09	0·760	0·52	0·11
0·25	0·39	0·318	0·332	0·43	0·374	0·384	0·25
0·02	0·04	0·145	0·041	0·04	0·087	0·068	0·05
0·02	0·05	0·035	0·062	0·07	0·040	0·032	0·024
0·006	0·006	0·011	0·007	—	0·008	0·013	—
2·4	2·49	2·39	2·419	2·60	2·73	2·434	2·362
0·69	0·73	0·62	0·713	0·83	0·78	0·668	0·698
—	0·002	—	—	—	—	—	—
—	—	—	0·001	—	—	—	0·002
0·003	0·006	0·014	0·027	0·03	0·004	0·026	0·009
—	0·002	—	0·001	—	—	0·006	—
—	—	—	0·001	0·01	—	—	0·002
0·006	0·004	0·014	0·016	0·02	0·006	0·026	0·006
0·36	0·23	0·76	0·874	1·24	0·774	1·403	0·337

Analysis of All Deaths by Age and Sex.

Age Group	Male	Female	Total
Under 1 year	170	107	277
1	4	6	10
2	12	3	15
3	7	2	9
4	4	4	8
5	24	4	28
10...	7	10	17
15...	19	7	26
20...	22	13	35
25...	25	12	37
30...	22	20	42
35...	40	36	76
40...	72	55	127
45...	143	89	232
50...	221	156	377
55...	347	246	593
60...	563	294	857
65...	668	415	1,083
70...	644	546	1,190
75...	535	647	1,182
80...	331	682	1,013
85...	190	480	670
90...	48	165	213
95...	6	25	31
Totals	4,124	4,024	8,148

Analysis of Infant Deaths by Age and Sex.

Age Groups	Male	Female	Total	
Under 1 day	65	46	111	
1 day	14	10	24	
2 days	9	3	12	
3 days	7	3	10	
4 days	2	1	3	
5 days	1	1	2	
6 days	2	—	2	
Total under 1 week ...	100	64	164	(A)
1 week (7-13 days) ...	11	3	14	
2 weeks (14-20 days)...	1	—	1	
3 weeks (21-27 days)...	6	3	9	
Total (7-27 days) ...	18	6	24	(B)
Total under 28 days ...	118	70	188	(A+B)
1 month	16	6	22	
2 months	11	7	18	
3 months	11	6	17	
4 months	3	7	10	
5 months	3	2	5	
6 months	1	—	1	
Total 1-6 months ...	45	28	73	(C)
7 months	2	1	3	
8 months	1	2	3	
9 months	1	2	3	
10 months	—	2	2	
11 months	3	2	5	
Total 7-11 months ...	7	9	16	(D)
Total under 12 months	170	107	277	(A+B+C+D)

TOTAL PRIMARY AND SECONDARY CAUSES OF DEATH
REPORTED ON DEATH CERTIFICATES—1967.
(N.B. Numbers relate to causes, not to individual deaths).

	Cause	Male	Female	Total	Totals expressed as percentage of all causes.
Underlying Primary...	1	4,124	4,024	8,148	56·5%
Other Primary ...	2	1,745	1,814	3,559	24·7%
,, ,, ...	3	289	327	616	4·3%
,, ,, ...	4	15	16	31	0·2%
Total Primary ...		6,173	6,181	12,354	85·7%
Secondary	2	550	538	1,088	7·5%
,, ...	3	397	366	763	5·3%
,, ...	4	105	105	210	1·5%
Total Secondary ...		1,052	1,009	2,061	14·3%
Total all causes ...		7,225	7,190	14,415	100%

EXPLANATORY NOTE

The coding procedure introduced into the Liverpool Health Department this year allows of the coding of up to four causes of death.

"Underlying primary" is defined as "(*a*) the disease or injury which initiated the train of morbid events leading directly to death, or (*b*) the circumstances of the accident or violence which produced the fatal injury". In the above table it is given as Cause 1, but is not necessarily the first entry on the death certificate.

"Other primary" includes any other causes in Part I of the death certificate, and "secondary" includes any causes in Part II of the death certificate.

At least one cause, the underlying primary, must be primary, but the other causes (if any) may be either primary or secondary, or any combination of the two. The numbers 2, 3 or 4 indicate the order of these causes, as categorised for tabulation, not necessarily as they appear on the death certificate.

1967—Summary of Deaths from Cardiovascular and Respiratory Causes for Certain Occupations.

(The following codes of causes of death (W.H.O. Intermediate List of 150 causes) are included: A80-93, 95-97. Underlying primary causes only).

Occupation	Clerks and Typists			Dock Labourers	Policemen and Firemen
Age Group	Male	Female	Total	M. (No F.)	M. (No F.)
15–19	—	—	—	—	—
20–24	—	1	1	—	—
25–29	—	—	—	—	—
30–34	—	1	1	—	—
35–39	—	—	—	—	—
40–44	2	—	2	1	—
45–49	7	1	8	1	—
50–54	8	—	8	6	—
55–59	9	2	11	7	2
60–64	20	2	22	18	2
65–69	28	3	31	25	5
70–74	42	5	47	13	9
75–79	28	5	33	17	2
80–84	12	7	19	4	—
85–89	7	2	9	6	1
90–94	3	—	3	1	—
95–	—	—	—	—	—
Total	166	29	195	99	21

Details of the Broad Groups of Causes used in the Summary by Age Group of Defined Causes of Death 1967.

Code numbers relate to the Intermediate List of 150 causes (List A) in the W.H.O. Manual (1957 edition).

Infectious and Infective Diseases.
A 1 — 43, A 71, A 79, A 80, A 88-93, A 101, A 102, A 104, A 108, A 109, A 132.

Neoplastic Diseases.
A 44 — 60.

Degenerative Diseases.
A 70, A 81 — 84, A 99, A 100, A 105, A 112, A 136, A 137.

Congenital Malformations, etc.
A 127 — 131, A 134, A 135.

Trauma.
A 138 — 150 inclusive.

Other causes.
All remaining causes in List A, viz.:—
A 61 — 69, A 72 — 78, A 85 — 87, A 94 — 98, A 103, A 106, A 107, A 110, A 111, A 113 — 126, A 133.

Summary by Age Groups of Dzfined Causes of Death—1967 (N.B.—Numbers relate to causes not individual deaths).

Age Groups	0-4 yrs		5-14 yrs		15-24 yrs		25-34 yrs		35-44 yrs		45-54 yrs		55-64 yrs		65 yrs & over		Totals		Sex ratio as percentage		Total	Per-centage Total Causes
Cause	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F		
Infections/Infective																						
Underlying	51	33	2	2	4	4	8	6	17	12	43	36	155	72	557	539	837	704	54%	46%	1,541	10·7%
Other Primary ...	20	12	5	1	4	2	4	—	6	9	40	22	110	54	434	408	623	508	55%	45%	1,131	7·8%
Secondary	3	1	—	—	—	—	1	1	3	9	15	7	69	24	216	134	307	176	64%	36%	483	3·4%
Totals	74	46	7	3	8	6	13	7	26	30	98	65	334	150	1,207	1,081	1,767	1,388	56%	44%	3,155	21·9%
Neoplastic																						
Underlying Primary	5	2	5	2	4	4	7	13	27	41	103	110	262	181	509	431	922	784	54%	46%	1,706	11·8%
Other Primary ...	—	—	—	—	—	—	1	5	6	19	22	37	60	53	92	86	181	200	48%	52%	381	2·6%
Secondary	—	—	—	—	—	—	—	1	1	—	3	—	17	7	71	46	92	54	63%	37%	146	1·0%
Totals	5	2	5	2	4	4	8	19	34	60	128	147	339	241	672	563	1,195	1,038	54%	46%	2,233	15·5%
Degenerative																						
Underlying Primary	1	2	2	1	5	—	7	3	43	15	164	60	399	233	1,078	1,545	1,699	1,859	48%	52%	3,558	24·7%
Other Primary ...	6	2	3	2	1	4	7	6	16	14	72	39	176	130	479	721	760	918	45%	55%	1,678	11·6%
Secondary	—	—	—	—	1	—	—	—	6	2	13	5	65	26	231	289	316	322	50%	50%	638	4·4%
Totals	7	4	5	3	7	4	14	9	65	31	249	104	640	389	1,788	2,555	2,775	3,099	47%	53%	5,874	40·7%

Other Primary ...	16	12	—	—	—	—	—	—	1	—	—	—	—	—	—	1	17	13	57%	43%	30	0·2%
Secondary	13	10	1	—	—	—	—	—	1	—	—	—	—	—	2	2	17	12	59%	41%	29	0·2%
Totals	132	91	6	3	2	—	2	—	2	2	—	1	—	2	2	6	146	105	58%	42%	251	1·7%
Trauma																						
Underlying Primary	13	9	13	5	25	10	18	3	16	8	22	14	31	10	60	130	198	189	51%	49%	387	2·7%
Other Primary ...	1	1	—	—	—	2	1	1	—	1	—	1	1	—	—	1	3	7	30%	70%	10	0·1%
Secondary	1	—	—	—	—	—	—	—	—	—	1	—	1	—	2	1	5	1	83%	17%	6	0·0%
Totals	15	10	13	5	25	12	19	4	16	9	23	15	33	10	62	132	206	197	51%	49%	403	2·8%
Other Causes																						
Underlying Primary	24	7	4	1	1	2	5	7	9	13	32	24	63	42	218	312	356	408	47%	53%	764	5·3%
Other Primary ...	9	3	1	1	1	—	—	3	11	5	32	20	109	60	302	419	465	511	48%	52%	976	6·8%
Secondary	3	10	1	3	1	1	1	2	1	3	10	15	70	55	228	355	315	444	42%	58%	759	5·3%
Totals	36	20	6	5	3	3	6	12	21	21	74	59	242	157	748	1,086	1,136	1,363	45%	55%	2,499	17·3%
Summary of above totals																						
Infectious/Infective	74	46	7	3	8	6	13	7	26	30	98	65	334	150	1,207	1,081	1,767	1,388	56%	44%	3,155	21·9%
Neoplastic	5	2	5	2	4	4	8	19	34	60	128	147	339	241	672	563	1,195	1,038	54%	46%	2,233	15·5%
Degenerative ...	7	4	5	3	7	4	14	9	65	31	249	104	640	389	1,788	2,555	2,775	3,099	47%	53%	5,874	40·7%
Congenital	132	91	6	3	2	—	2	—	2	2	—	1	—	2	2	6	146	105	58%	42%	251	1·7%
Trauma	15	10	13	5	25	12	19	4	16	9	23	15	33	10	62	132	206	197	51%	49%	403	2·8%
Other Causes ...	36	20	6	5	3	3	6	12	21	21	74	59	242	157	748	1,086	1,136	1,363	45%	55%	2,499	17·3%
Totals	269	173	42	21	49	29	62	51	164	153	572	391	1,588	949	4,479	5,423	7,225	7,190	50·1%	49·9%	14,415	100%

Occasional discrepancies in totals in the percentage column are caused by rounding of final digits to one decimal place.

MATERNITY AND CHILD WELFARE

PUERPERAL PYREXIAS NOTIFIED IN 1967

Occurring in Hospital		285
Occurring at Home		2
TOTAL		287
Uterine infection		86
Respiratory tract infection		74
Urinary tract infection...		55
Post operative caesarian section ...		14
Wound infection		7
Breast infection		4
Peritonitis		3
Perineal infection		3
Others		10
Pyrexias of unknown origin		31
		287

MIDWIFERY SERVICE

ENQUIRIES INTO HOME CONDITIONS—1967

BABIES

Hospital Requests	Suitable for Early Discharge	No Contact	Not Suitable for Early Discharge
3,451	2,402	386	663

HOSPITAL DISCHARGES—1967

MIDWIFERY SERVICE — HOSPITAL DISCHARGES

Hospital	Number of Days										Premature Births
	2	3	4	5	6	7	8	9	10	Total	
Broadgreen... ...	143	140	25	27	30	34	6	1	—	406	73
Mill Road	444	250	72	84	65	226	104	7	5	1,257	247
Sefton General ...	180	178	255	224	118	267	140	39	18	1,419	139
Walton	150	61	37	230	313	122	50	17	6	986	40
Liverpool Maternity	46	95	228	467	543	442	286	55	14	2,176	150
Others	3	5	3	11	60	18	7	2	—	109	2
Total ...	966	729	620	1,043	1,129	1,109	593	121	43	6,353	651

Weights of Premature Babies—1967
Cared for by Specially Trained Midwives

	Babies born at home and cared for by the Premature Baby Team	Babies born at home and transferred to hospital	Babies born in hospital and discharged to the care of the Premature Baby Team
Less than 3 lb. 4 ozs.	—	—	—
3 lb. 5 ozs. to 4 lb. 6 ozs.	4	—	—
4 lb. 7 ozs. to 4 lb. 15 ozs.	4	—	57
5 lb. to 5 lb. 8 ozs.	14	—	376
5 lb. 9 ozs. and over	2	—	218
Totals	24	—	651
Sets of twins	—	—	32
One of twins	—	—	5
Sets of triplets	—	—	1
Two of triplets	—	—	—

Patients Transferred to Hospital—1967

Mothers

Postmaturity	57
Malpresentations	57
Ante-partum haemorrhage	37
Pre-eclamptic Toxaemia	32
Premature rupture of membranes	27
Anaemia	25
Domestic reasons	22
Multiple pregnancy	18
Prolonged labour	17
Premature labour	14
Abortion	12
Bad obstetric history	11
Post-Partum haemorrhage	8
R.H. Incompatibility	7
Disproportion	6
Foetal distress	5
Multiparity	4
Hyperemesis	3
Hydramnios	3
Urinary complications	3
Chest complications	3
Placenta praevia	2
Intra-uterine death	2
Glycosuria	2
Uterine infection	2
Perineal repair	2
Others	8
	389

Babies

Congenital Abnormalities	10
Prematurity	6
Cyanosis	3
Malaena	3
Twitchings	2
Cold Syndrome	2
Asphyxia	1
Enteritis	1
Lethargy	1
	29

Reasons for Midwives Calling in Medical Aid—1967

Mothers

Ruptured perineum	46
Prolonged labour	32
Malpresentations	18
Premature rupture of membranes	15
Anaemia	14
Thrombophlebitis	14
Foetal distress	14
Pyrexia...	13
Retained products	11
Ante-partum haemorrhage ...	11
Premature labour	10
Post-partum haemorrhage ...	8
Mastitis	7
Pre-eclamptic toxaemia ...	6
Post maturity	5
Urinary infection	4
Abdominal pain	3
Twin delivery	2
Others	7
	240
Total	329

Babies

Sticky eyes	22
Loose stools	12
Twitching	8
Asphyxia	7
Cyanosis	5
Septic spots	5
Prematurity	5
Congenital abnormalities	4
Snuffles	3
Pyrexia	3
Melaena	2
Baby Mastitis	2
Stillbirths	2
Jaundice	2
Coryza	1
Poor condition of baby	6
	89

Patients on Doctor's Maternity Medical List	303
Patients not on Doctors' Maternity Medical List	26

MIDWIFERY TABLE — HOSPITAL DISCHARGES—1967

Hospital	Number of Days	2	3	4	5	6	7	8	9	10	Total	Premature Births	Total
Broadgreen Hospital	... ...	143	140	25	27	30	34	6	1	—	406	73	479
Mill Road Hospital	... ...	444	250	72	84	65	226	104	7	5	1,257	247	1,504
Sefton General Hospital	... ...	180	178	255	224	118	267	140	39	18	1,419	139	1,558
Walton Hospital ...	... ...	150	61	37	230	313	122	50	17	6	986	40	1,026
Liverpool Maternity Hospital	... ...	46	95	228	467	543	442	286	55	14	2,176	150	2,326
Others	... ...	3	5	3	11	60	18	7	2	—	109	2	111
Total	... ...	966	729	620	1,043	1,129	1,109	593	121	43	6,353	651	7,004

SALMONELLA CARRIER STATE AT END OF YEAR.

Organism	Age (at start of investigation)	Sex	Occupation	Length of carrier state
S. typhi phage type E 1.	55	Male	Engineer	*Over 3 months
S. paratyphi "B" phage Type II	60	Female	—	*Over 21 years
S. paratyphi "B" phage type 3. Variant 9.	23	Female	Nurse	*Over 2 months
S. typhimurium phage type 1B.	4/12	Male	Infant	*Over 2 weeks
do.	6/12	Male	Infant	*Over 3 weeks
S. typhimurium phage type 1A.	7	Female	Scholar	*Over 2 months
S. typhimurium phage type 3.	72	Female	—	*Over 1 month
do.	58	Male	Shipping Butcher	*Over 2 months
S. typhimurium phage type 29.	2	Male	Infant	9 months
do.	13/12	Female	Infant	$2\frac{1}{2}$ months
do.	2	Female	Infant	$2\frac{1}{2}$ months
do.	15	Female	Scholar	6 months
do.	16	Female	Clerk	6 months
do.	19/12	Female	Infant	6 months
do.	3/12	Male	Infant	$4\frac{1}{2}$ months
do.	11/12	Male	Infant	$3\frac{1}{2}$ months
S. panama	64	Female	Housewife	4 months
do.	70	Male	Retired	*Over 3 months
do.	44	Male	Instrument Maker	*Over 3 months
do.	57	Female	Housewife	*Over 1 month
S. reading	21	Male	Photographer	*Over 5 months
do.	16/12	Female	Infant	*Over 3 months
do.	41	Female	Forecourt Attendant	*Over 3 months
S. anatum	38	Female	Housewife	*Over 1 month
do.	48	Female	Food-handler	*Over 8 months
S. enteritidis Phage type 8.	7	Male	Scholar	4 months
S. enteritidis Phage type 2 Variety gena.	25	Male	Driver	1 month
S. duisberg	3/12	Female	Infant	$9\frac{1}{2}$ months
S. indiana	22	Female	Clerk	*Over 2 months

*Still actively excreting on 31st December, 1967.

TUBERCULOSIS RATES

INCIDENCE, PREVALENCE AND MORTALITY RATES FOR PERIODS 1958—1967 INCLUSIVE.

YEAR	Incidence Rate per 1,000 of population			Prevalence Rate per 1,000 of population*			Mortality Rate per 1,000 of population		
	Pulmonary	Non Pulmonary	Over-all Total	Pulmonary	Non Pulmonary	Over-all Total	Pulmonary	Non Pulmonary	Over-all Total
1958	1·04	0·10	1·15	11·31	1·00	12·30	0·143	0·009	0·152
1959	2·15	0·06	2·22	10·53	0·87	11·40	0·135	0·004	0·139
1960	0·58	0·06	0·64	11·22	0·75	11·97	0·107	0·004	0·111
1961	0·54	0·07	0·62	10·14	0·65	10·79	0·107	0·008	0·115
1962	0·59	0·07	0·65	9·05	0·61	9·66	0·099	0·009	0·109
1963	0·53	0·06	0·59	8·02	0·54	8·57	0·073	0·005	0·078
1964	0·37	0·04	0·41	7·14	0·51	7·64	0·052	0·004	0·056
1965	0·34	0·05	0·39	5·84	0·39	6·23	0·058	0·001	0·060
1966	0·33	0·04	0·37	5·17	0·39	5·56	0·065	0·007	0·072
1967	0·33	0·04	0·37	4·59	0·39	4·98	0·061	0·007	0·068

N.B.—From the 23rd February, 1959 to the 21st March, 1959, a very large Mass Radiography Campaign was held in the City during which 454,286 persons were x-rayed. This produced a temporary increase in incidence and prevalence rates of pilmonary tuberculosis which is reflected in the table above.

* $\frac{\text{No. of cases on register at beginning of year x1,000}}{\text{Population as at Mid-year.}}$

NOTIFICATIONS—AGE GROUPS 1967

Age	Male	Female	Total
–1	—	—	—
1–	—	—	—
2–	1	—	1
3–	3	1	4
4–	2	—	2
5–	4	4	8
10–	3	1	4
15–	6	7	13
20–	12	5	17
25–	13	9	22
30–	8	7	15
35–	16	5	21
40–	11	8	19
45–	26	4	30
50–	20	2	22
55–	11	5	16
60–	16	4	20
65–	15	9	24
70–	10	3	13
75–	4	3	7
80+	3	2	5
Age unknown	—	—	—
Totals	184	79	263

NOTIFICATIONS OF TUBERCULOSIS—1928-1967

Year	Children (0–4 years)		Schoolchildren (5–14 years)		Adolescents & Adults (15+ years)	
	Pulmonary	Non-Pulmonary	Pulmonary	Non-Pulmonary	Pulmonary	Non-Pulmonary
1928	93	159	407	244	1968	242
1929	106	164	425	238	1975	269
1930	98	178	470	256	1890	263
1931	88	163	365	267	1805	289
1932	71	125	277	279	1757	268
1933	77	138	262	266	1941	250
1934	56	107	223	234	1624	244
1935	36	93	167	178	1494	231
1936	36	85	185	165	1424	197
1937	30	77	128	159	1397	172
1938	43	82	117	118	1281	186
1939	24	64	72	78	1117	175
1940	26	59	51	67	1234	148
1941	33	68	44	79	1225	158
1942	32	63	54	84	1284	201
1943	47	60	64	107	1368	168
1944	29	45	68	58	1344	147
1945	35	45	60	70	1360	133
1946	35	40	63	72	1380	125
1947	50	37	88	69	1341	128
1948	51	49	79	49	1490	130
1949	63	41	77	63	1479	107
1950	106	32	113	41	1353	91
1951	106	26	101	47	1328	87
1952	90	37	161	35	1318	67
1953	77	18	130	27	1175	78
1954	46	22	114	28	975	97
1955	46	24	82	23	951	71
1956	34	9	88	13	938	81
1957	46	9	79	12	892	80
1958	47	17	61	11	686	48
1959	29	12	54	6	1550	30
1960	17	3	24	5	398	36
1961	19	6	26	6	360	42
1962	24	3	23	2	391	45
1963	35	3	37	2	319	38
1964	16	3	17	2	240	23
1965	9	3	15	3	225	28
1966	12	—	15	4	208	26
1967	6	1	9	3	219	25

Number of persons examined for the first time	4,379	Number found to be free of disease ...	2,32
Number found to be definitely tuberculous as detailed in 'A' below	252	Number found to be suffering from other conditions	96

DIAGNOSIS	RESPIRATORY			NON-RESPIRATORY			TOTAL			GRAN TOT
	Adults		Children	Adults		Children	Adults		Children	
	M.	F.		M.	F.		M.	F.		
A.—NEW CASES examined during the year	157	54	10	9	18	4	166	72	14	25
B.—CONTACTS examined during the year:										
(*a*) Definitely tuberculous ...	3	5	7	—	—	2	3	5	9	1
(*b*) Diagnosis not completed	2	8	10	—	—	—	2	8	10	2
(*c*) Non-tuberculous ...	366	564	1,448	—	—	—	366	564	1,448	2,37
C.—CASES written off the Register as Recovered	212	188	11	11	11	10	223	199	21	44
D.—NUMBER OF CASES on Register on 31st December 1967:										
(*a*) Definitely tuberculous ...	1,553	1,075	160	92	146	31	1,645	1,221	191	3,05
(*b*) Diagnosis not completed	3	6	8	—	—	—	3	6	8	1

Number of attendances of patients at the Chest Clinics during the year 1967 ...	15,264	Number of patients under medical treatment at home on 31st December, 1967	63
Number of visits paid by the Tuberculosis Medical Officer to the homes of patients during 1967	58	Total number of visits paid to the homes of patients by Tuberculosis Visitors during 1967	18,86
Total number of cases vaccinated with B.C.G. during 1967.		Includes newly born babies in Maternity War in Sefton General Hospital, Walton General, M Road and Liverpool Maternity Hospitals.	
Children	1,379		
Others	130		

B.C.G. Vaccination School Children—1967

Number of School Children offered B.C.G. vaccination	10,838
Number of acceptors	9,382
Number Heaf-tested...	9,213
Number of positive Heaf tests	1,206
Number of children vaccinated with B.C.G.	7,294

B.C.G. Vaccination of School Children, Heaf Tests—1957–1967

Year	Number Tested	Number Positive	Percentage of Number Tested Found Positive
1957	7,224	1,581	21.9
1958	8,587	1,717	20.0
1959	11,313	1,810	16.0
1960	10,569	1,480	14.0
1961	11,542	1,442	12.5
1962	9,777	1,305	13.3
1963	9,247	1,373	14.8
1964	8,456	1,309	15.5
1965	8,601	1,352	15·7
1966	8,356	1,135	13·5
1967	9,213	1,206	13.09

REFERRALS—1967

Sources of Reference	No. of Persons
General Practitioners	388
Hospitals—	
In-Patients on discharge	1,706
After Out-Patient or Day Treatment	104
Casualty and Reception Wards	164
Section 25 or 26 action after admission	138
Reports requested	94
Education Department (Mentally subnormal children or school leavers)	155
Police and Courts	79
Relatives, Patients, Public Bodies, etc.	392
Patients already receiving community care, referred for hospital admission	153
Total	3,373

ACTION TAKEN IN ABOVE CASES

Action Taken	No. of Persons
Admitted to Hospital—	
Mental Health Act, 1959 Section 29 (Emergency)	259
Mental Health Act, 1959 Section 25 (Observation)	248
Mental Health Act, 1959 Section 26 (Treatment)	13
Mental Health Act, 1959 Section 60 (Court)	43
*Informally	574
Action taken after admission to hospital—	
Section 25 and 26 applications made	138
Reports made on home circumstances	94
Placed on community care list (including 1,706 psychiatric hospital discharges)	1,918
No further action necessary	51
Escorts to hospital	35
Total	3,373

*This number represents only a proportion of total informal admissions, in many cases the Mental Health Service was not involved in admission

EMERGENCY CALLS—1967

Month	(A) Accident/ Emergency Calls	(B) False calls with good intent	(C) Malicious False calls
January ...	3,377	143	19
February ...	1,833	103	16
March	2,194	149	28
April	1,995	126	19
May	2,215	151	16
June	2,071	119	13
July	2,310	160	26
August ...	2,222	160	18
September ...	2,102	137	20
October ...	2,057	146	20
November ...	2,191	138	9
December ...	2,423	187	18
Total ...	25,990	1,719	222

(1) The totals shown in columns (B) and (C) are to be taken as *being included in column* (A), but are shown thus for statistical purposes.

INFECTIOUS PATIENTS—1967

Month	Admissions	Hospital to Hospital Transfers	Total	TYPE	
				Sitting Cases	Ambulance Cases
January	128	41	169	132	37
February	135	29	164	113	51
March	134	15	149	114	35
April	124	24	148	119	29
May	117	24	141	91	50
June	132	27	159	107	52
July	115	28	143	91	52
August	119	36	155	96	59
September	89	29	118	77	41
October	102	25	127	74	53
November	129	24	153	110	43
December	128	32	187	126	34
Total ...	1,452	334	1,786	1,250	536

VEHICLES—1967

Age of vehicles in years	Under 1	1–	2–	3–	4–	5–	6–	7–	8–	9–	Over 10	Total
	8	14	16	1	12	10	6	5	1	1	—	74

COMPARATIVE STATISTICS FOR 1966–67

	1966	1967
Diesel Ambulances	23·9 m.p.g.	26·4 m.p.g.
Petrol Ambulances	16·2 m.p.g.	16·1 m.p.g.
Dual-Purpose Ambulances...	15·2 m.p.g.	15·5 m.p.g.
Sitting-case Ambulances	20·9 m.p.g.	20·8 m.p.g.
Vehicle Mileage	1,045,135	1,039,806
Fuel—Diesel	11,410 gallons	5,142 gallons
—Petrol	48,975 gallons	56,692 gallons
Oil	985 gallons	1,041½ gallons

Average mileage for the fleet was as follows:—

Type of Vehicle	Average Annual Mileage		Percentage increase/ decrease on 1966
	1966	1967	
Ambulances Petrol ...	16,647	18,476	+ 11·00%
Diesel... ...	13,631	15,078	+ 10·6%
Sitting-case Ambulances ...	14,322	14,217	— 0·73%
Sitting-case Cars	6,642	5,984	— 10·00%

Fuel Consumption

Stretcher case ambulances ...	Petrol	16·1 miles per gallon
	Diesel	26·4 „ „ „
Sitting-case ambulances ...	Petrol	15·5 „ „ „
Sitting-case cars...	Petrol	20·8 „ „ „

The total petrol consumption during 1967 increased by 7,717 gallons or 15.8 per cent to 56,692 gallons and the diesel fuel consumption decreased by 6,268 gallons or 54·9 per cent to 5,142 gallons.

NUMBER OF PERSONS CARRIED	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Non-infectious—													
Out-patients	19,530	18,031	18,382	17,935	19,263	18,571	17,067	17,138	16,609	17,888	17,585	15,161	213,160
Hospital Admissions/ Discharges	3,257	2,726	2,932	2,815	2,969	2,897	2,817	2,792	2,676	2,856	3,322	3,460	35,519
Inter-Hospital Transfers	688	623	699	573	637	644	735	635	667	696	655	621	7,873
Infectious—													
Hospital Admissions/ Discharges	128	135	134	124	117	132	115	119	89	102	129	128	1,452
Inter-Hospital Transfers	41	29	15	24	24	27	28	36	29	25	24	32	334
Accident/Emergency ...	1,962	1,777	2,114	1,958	2,109	2,006	2,219	2,136	2,032	1,972	2,137	2,302	24,724
Other Persons	21	41	258	—	—	—	3	3	10	42	11	4	393
Totals 1967 ...	25,627	23,362	24,534	23,429	25,119	24,277	22,984	22,859	22,112	23,581	23,863	21,708	283,455
Totals 1966 ...	24,108	23,058	26,300	22,464	24,649	25,612	23,821	23,886	24,321	23,660	24,912	23,070	289,861

HANDICAPPED PERSONS TRANSPORT — 1967

Number of Persons Attending Centres Daily

	Longmoor Lane	Rumney Road	Walton Village	New Hall	Mencap House	Sandfield Park	Greenbank Lane	Princes Road	Dovecot	Garston	Mill Street	Cadwa Hall	Knotty Ash	Total
Monday ...	23	14	10	73	30	38	10	21	15	33	—	22	15	304
Tuesday ...	20	20	22	73	30	38	10	21	15	33	—	—	19	301
Wednesday ...	24	16	—	73	30	38	10	21	15	33	17	—	11	288
Thursday ...	27	17	14	73	30	38	10	21	15	33	—	—	16	294
Friday ...	24	15	10	73	30	38	10	21	15	33	—	22	16	307
Total ...	118	82	56	365	150	190	50	105	75	165	17	44	77	1,494

Number of Persons Attending Centres of an Evening

	Inskip League	Wheel Chair Club	Baths	A.T.C. Club	Epileptic Club	Deaf and Dumb Club	Total
Monday	—	—	—	—	—	—	—
Tuesday	34	—	—	—	—	—	34
Wednesday	—	30	—	—	—	10	40
Thursday	—	—	11	7	—	—	18
Friday	—	—	—	—	13	—	13
Total	34	30	11	7	13	10	105

Department	Admission to Super-annuation Scheme		Extension of Sick pay		Fitness of newly appointed officer		Suitability to continue employ-ment		Total
	Fit	Unfit	Fit	Unfit	Fit	Unfit	Fit	Unfit	
Airport	10	—	—	—	9	—	—	—	19
Art Gallery	2	—	—	—	2	—	1	1	6
Baths	28	1	1	—	1	—	4	—	35
Building Surveyor's	—	—	—	—	9	—	—	—	9
Central Purchasing	1	—	—	—	27	1	—	1	30
Children's	1	—	—	—	140	1	3	4	149
City Analyst	—	—	—	—	1	—	—	—	1
City Architect's	—	—	—	—	25	1	—	—	26
City Engineer's	199	9	49	11	79	—	19	12	378
City Estates	11	6	1	2	41	—	2	5	68
City Lighting	9	—	—	—	3	—	2	1	15
City Planning	—	—	—	—	29	—	1	—	30
City Treasury	1	1	2	—	193	4	2	2	205
Education	119	2	11	6	522	1	25	76	762
Fire Service	—	—	11	—	91	10	14	2	128
Health...	37	1	5	2	445	7	15	24	536
Housing	55	2	4	—	72	—	8	4	145
Libraries	4	—	1	—	49	—	2	3	59
Magistrates	—	—	—	—	8	—	1	—	9
Markets	11	—	—	—	4	—	—	1	16
Mersey Tunnel	12	—	2	—	25	—	3	2	44
Museums	2	1	—	—	7	—	1	—	11
Parks & Recreation	45	4	12	4	37	—	2	4	108
City Transport	408	5	2	—	41	—	6	19	481
Police	14	3	18	1	115	5	14	7	177
Probation	—	—	—	—	19	—	—	—	19
Town Clerk's	—	—	—	—	81	1	1	2	85
Water	90	4	21	6	29	1	5	9	165
Weights & Measures ...	—	—	—	—	3	—	—	—	3
Works	369	25	19	3	63	2	23	34	538
Welfare	36	5	—	1	70	—	10	20	142
TOTAL	1,464	69	159	36	2,240	34	164	233	4,399

Total Fit	4,027	Cancelled	499
Total Unfit ...	372	Other Authorities ...	73

SUMMARY OF PROSECUTIONS (CASES HEARD)—1967

Act	Section	No. of Informations or Complaints	Penalties	Costs
			£ s. d.	£ s. d.
SHOPS ACT AND FOOD AND DRUGS ACT, REGULATIONS				
Shops Act, 1950/1965	Evening Closing	11	44 0 0	37 16 0
Shops Act, 1950/1965	Sunday Closing	3	2 0 0	—
Food and Drugs Act, 1955	Food not of quality demanded	6	115 0 0	24 8 0
FOOD HYGIENE (Markets, Stalls and Delivery Vehicles) REGULATIONS, 1966		3	—	—
		23	161 0 0	62 4 0

FACTORIES ACT, 1961

PART 1 OF THE ACT

1. INSPECTIONS for purposes of provisions as to Health (including inspections made by the Public Health Inspectors).

Premises (1)	Number on Register (2)	Inspections (3)	Number of written notices (4)	Occupiers prosecuted. (5)
(i) Factories in which Sections 1, 2, 3, 4 and 6 are to be enforced by local authorities	743	129	6	—
(ii) Factories not included in (i) in which Section 7 is enforced by local authority	1,986	685	115	—
(iii) Other premises in which Section 7 is enforced by the local authority (excluding out-workers premises)	101	90	—	—
Total	2,830	904	121	—

2. Cases in which DEFECTS were found.

Particulars (1)	Found (2)	Remedied (3)	Number of Cases in which Defects were found Referred		Number of Cases in which Prosecutions were instituted (6)
			To H.M. Inspector (4)	By H.M. Inspector (5)	
Want of Cleanliness (S.1.) ...	5	5	3	1	—
Overcrowding (S.2.)	—	—	—	—	—
Unreasonable temperature (S.3.)	1	1	—	—	—
Inadequate ventilation (S.4.) ...	1	1	—	—	—
Ineffective drainage of floors (S.6.)	—	—	—	—	—
Sanitary Conveniences (S.7.) (*a*) Insufficient...	3	2	—	1	—
(*b*) Unsuitable or defective ...	110	108	—	25	—
(*c*) Not separate for sexes ...	1	1	—	1	—
Other offences against the Act (not including offences relating to Outwork)	—	—	—	—	—
Total	121	118	3	28	—

FACTORIES ACTS

PART VIII OF THE ACT

OUTWORK

SECTIONS 133 AND 134

	Section 133			*Section* 134		
Nature of Work	No. of out-workers in August list required by Section 133 (1) (*c*)	No. of cases of default in sending lists to the Council	No. of prosecutions for failure to supply lists	No. of instances of work in unwholesome premises	Notices served	Prosecutions
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Wearing apparel-making, etc.	41	—	—	—	—	—
Stuffed toys Christmas stockings	98	—	—	—	—	—
Total	139	—	—	—	—	—

CLEARANCE AREAS NOT YET CONFIRMED BY THE MINISTER

at 31st December, 1967.

Area	*Houses*	*Families*
South Street Clearance Area, 1965	830	905
Carlton Hill Clearance Area, 1965	133	176
Admiral Street Clearance Area, 1965...	12	14
Letitia Street No. 1 Clearance Area, 1965	8	9
Letitia Street No. 2 Clearance Area, 1965	8	8
Sefton Park Road Clearance Area, 1965	3	7
Norwood Grove No. 1 Clearance Area, 1965	362	440
Norwood Grove No. 4 Clearance Area, 1965	7	10
Norwood Grove No. 5 Clearance Area, 1965	223	253
Norwood Grove No. 6 Clearance Area, 1965	19	24
Erskine Street Clearance Area, 1966	347	408
Pickering Street Clearance Area, 1966	604	728
Richmond Terrace Clearance Area, 1966	4	12
Woodville Terrace No. 1 Clearance Area, 1966	58	64
Woodville Terrace No. 2 Clearance Area, 1966	25	28
Cupid Street Clearance Area, 1966	340	349
Stanfield Road Clearance Area, 1966...	1,076	1,158
Hamilton Road No. 1 Clearance Area, 1966...	5	5
Hamilton Road No. 2 Clearance Area, 1966...	7	8
Marlborough Street No. 1 Clearance Area, 1966	9	10
Marlborough Street No. 2 Clearance Area, 1966	6	8
Priory Grove Clearance Area, 1966	844	882
Hamilton Road No. 3 Clearance Area, 1966...	64	73
Loraine Street Clearance Area, 1966	15	17
Kinder Street Clearance Area, 1966	47	54
Starkie Street Clearance Area, 1966	12	15
Beacon Lane No. 1 Clearance Area, 1966	375	394

CLEARANCE AREAS NOT YET CONFIRMED BY THE MINISTER

at 31st December, 1967.—*continued*

Area	*Houses*	*Families*
Beacon Lane No. 2 Clearance Area, 1966	209	222
Calder Street Clearance Area, 1966	248	263
Kimberley Street Clearance Area, 1966	187	512
Carlingford Street Clearance Area, 1966	84	169
Kingsley Road Clearance Area, 1966...	8	8
Mere Lane Clearance Area, 1966	7	11
Rubens Street Clearance Area, 1966	105	111
Devon Street No. 1 Clearance Area, 1966	7	8
Westbourne Street Clearance Area, 1966	6	8
Swiss Road Clearance Area, 1966	3	4
Alvina Lane No. 1 Clearance Area, 1966	26	36
Alvina Lane No. 2 Clearance Area, 1966	19	28
Everton Valley No. 1 Clearance Area, 1966	16	25
Everton Valley No. 2 Clearance Area, 1966...	2	4
Everton Valley No. 3 Clearance Area, 1966...	11	17
Netherfield Road North No. 5 Clearance Area, 1966	12	13
Mark Street Clearance Area, 1966	6	6
Melville Place No. 1 Clearance Area, 1967	30	55
Melville Place No. 2 Clearance Area, 1967	31	56
Mill Lane (Old Swan) Clearance Area, 1967...	10	9
Toxteth Street Clearance Area, 1967...	226	263
Ballington Street Clearance Area, 1967	115	120
Kingsley Road No. 2 Clearance Area, 1967	44	70
Kingsley Road No. 3 Clearance Area, 1967	15	15
Solway Street No. 1 Clearance Area, 1967	44	46
Solway Street No. 2 Clearance Area, 1967	8	9
Solway Street No. 3 Clearance Area, 1967		15

CLEARANCE AREAS NOT YET CONFIRMED BY THE MINISTER

AT 31ST DECEMBER, 1967.—*continued*

Area	*Houses*	*Families*
Maitland Street Clearance Arca, 1967	42	43
Mill Street No. 12 Clearance Area, 1967	2	3
Mill Street No. 13 Clearance Area, 1967	5	12
Upper Parliament Street No. 2 Clearance Area, 1967	4	23
Upper Parliament Street No. 3 Clearance Area, 1967	4	18
Upper Parliament Street No. 4 Clearance Area, 1967	2	12
Upper Parliamcnt Strcet No. 5 Clearance Area, 1967	2	4
Upper Parliament Street No. 6 Clearance Area, 1967	6	23
Upper Parliament Street No. 7 Clearance Area, 1967	5	14
Aiken Street Clearance Area, 1967	178	190
Lockhart Street Clearance Area, 1967	53	56
Grafton Street No. 3 Clearance Area, 1967	8	11
Haddock Street No. 1 Clearance Area, 1967	3	4
Haddock Street No. 2 Clearance Area, 1967	24	30
Esk Street Clearance Area, 1967	7	7
Clyde Street Clearance Area, 1967	14	15
Forge Street Clearance Area, 1967	8	9
Whalley Street Clearance Area, 1967...	330	348
Wilbraham Street No. 1 Clearance Area, 1967	19	20
Wilbraham Street No. 2 Clearance Area, 1967	28	30
Arley Street Clearance Area, 1967	13	14
Brunswick Place Clearance Area, 1967	8	10
Boundary Street No. 7 Clearance Area, 1967	5	5
Buttermere Street Clearance Area, 1967	5	5
Lorton Street Clearance Area, 1967	5	5
Menzies Street Clearance Area, 1967	764	803
Bousfield Street Clearance Area, 1967	135	145

CLEARANCE AREAS NOT YET CONFIRMED BY THE MINISTER

at 31st December, 1967.—*continued*

Area	*Houses*	*Families*
Balkan Street No. 1 Clearance Area, 1967	23	23
Balkan Street No. 2 Clearance Area, 1967	38	38
Beloe Street Clearance Area, 1967	9	11
Tapley Place No. 1 Clearance Area, 1967	25	31
Tapley Place No. 2 Clearance Area, 1967	3	2
Derby Place Clearance Area, 1967	11	9
Douro Place Clearance Area, 1967	6	4
Barry Street Clearance Area, 1967	650	684
Salop Street No. 1 Clearance Area, 1967	137	143
Salop Street No. 2 Clearance Area, 1967	54	55
Salop Street No. 3 Clearance Area, 1967	4	4
Florence Street No. 1 Clearance Area, 1967...	10	12
Florence Street No. 2 Clearance Area, 1967...	3	3
Tetlow Street No. 3 Clearance Area, 1967	2	2
Walton Lane Clearance Area, 1967	14	16
Freeland Street Clearance Area, 1967	331	375
Fordham Street Clearance Area, 1967	68	77
Langham Street No. 1 Clearance Area, 1967	73	106
Langham Street No. 2 Clearance Area, 1967	14	22
Langham Street No. 3 Clearance Area, 1967	3	3
Netley Street Clearance Area, 1967	56	60
Luton Grove Clearance Area, 1967	9	10
Tetlow Street No. 4 Clearance Area, 1967	4	4
Salop Street No. 4 Clearance Area, 1967	4	4
Grinfield Street No. 2 Clearance Area, 1967	29	30
Nile Street No. 1 Clearance Area, 1967	32	57
Nile Street No. 2 Clearance Area, 1967	4	4

CLEARANCE AREAS NOT YET CONFIRMED BY THE MINISTER

at 31st December, 1967.—*continued*

Area	*Houses*	*Families*
Alfred Street Clearance Area, 1967	34	53
St. James Road Clearance Area, 1967	19	50
Rathbone Street Clearance Area, 1967	5	8
Washington Street Clearance Area, 1967	3	5
Great George Street Clearance Area, 1967	2	13
Kemble Street Clearance Area, 1967	227	234
Mulgrave Street No. 1 Clearance Area, 1967	37	140
Mulgrave Street No. 2 Clearance Area, 1967	7	23
Mulgrave Street No. 3 Clearance Area, 1967	3	12
Crosfield Road No. 1 Clearance Area, 1967	321	337
Cotter Street Clearance Area, 1967	35	47
Ash Street Clearance Area, 1967	104	106
TOTALS:	11,027	12,838

NOTE:—The last 24 Clearance Areas on this list were referred back by the Housing Committee to the appropriate officers in order that a report should be made upon the implications in relation to the re-housing programme.

COMPULSORY PURCHASE ORDERS CONFIRMED DURING 1967

Order	*No. of Houses*	*No. of Families*
Horsley Street C.A. C.P.O.	377	410
Pluto Street C.A. C.P.O.	314	355
Queens Road Area C.P.O.	1,082	1,308
Flinders Street Area C.P.O.	521	631
Thames Street Area C.P.O.	296	356
Norwood Grove Area. No. 2	25	62
Minto Street C.A. C.P.O.	303	303
Havelock Street C.A. C.P.O.	446	507
Everton Terrace No. 2. C.A. C.P.O.	15	14
Reynolds Place C.P.O.	12	12
Stockdale Street/Midgehall Street Area C.P.O.	29	31
Devon Street No. 2. C.A. C.P.O.	11	6
Greenside Area C.P.O.	14	13
Threlfall Street Area C.P.O.	134	140
Berwick Street C.A. C.P.O.	187	209
Eldon Place C.A. C.P.O.	19	17
Tennyson Street C.A. C.P.O.	440	836
Chester Street Area C.P.O.	8	16
	4,233	5,226

CLEARANCE ORDERS CONFIRMED DURING 1967

Order	*No. of Houses*	*No. of Families*
Holly Bank/Helena Street	18	20

Atmospheric Pollution Measurement—1967

Standard Deposit Gauge

The results are quoted in tons per square mile per month and the averages are as follows :—

Location of Instrument	Tons per Square Mile
Aigburth Vale	9·85
*Clarence Dock	17·65
*Dunbabin Road	11·85
Hatton Garden	29·26
*Mill Lane (West Derby)	14·11
*Rocky Lane (Childwall)	15·03

(*Period January to June)

Estimation of Sulphur Trioxide Pollution. Lead Peroxide Method.

The daily average is quoted in milligrams per 100 square centimeters.

January to June

Clarence Dock	2·29
Dunbabin Road	2·10
Mill Lane (West Derby)	2·21

CLEAN AIR ACT, 1956

Inspections, Observations, Etc.

Particulars of Inspections, 1967

Number of Inspections to Secure Smoke Control	20,337
Incidental Visits	5,977
Special Visits	4,769
Re-Visits	6,675
Advisory Visits	6,023
Total Number of Appliances Examined	15,181

OBSERVATIONS

Industrial Chimneys

Routine Observations	1,182
Special Observations	270
Total Minutes of Excess Smoke Recorded	108

SHIPPING

Routine Observations	556

CLEAN AIR ACT, 1956, SECTION 3

Approval of New Furnaces 1967

Notices of Intention to install received	85
Application for Approval received	65
Installations approved	65

CLEAN AIR ACT, 1956, SECTION 10

Heights of New Chimneys 1967

Plans examined to Check Chimney Height	30
Plans approved	16
Plans approved after Chimney Height Increased	14

Smoke and Sulphur Dioxide Volumetric Filter
Measurements are in micrograms per cubic metre

	SMOKE												SULPHUR											
	J.	F.	M.	A.	My.	Jn.	Jy.	A.	S.	O.	N.	D.	J.	F.	M.	A.	My.	Jn.	Jy.	A.	S.	O.	N.	D.
													CRESSINGTON PARK											
Average Value ...	109	64	25	38	28	14	7	16	31	13	96	114	206	267	323	250	250	242	300	368	238	212	278	322
Highest Value ...	382	328	110	84	103	35	23	52	76	37	283	443	432	660	428	580	570	600	550	972	442	672	594	703
Lowest Value ...	33	11	5	1	0	0	0	0	1	1	3	7	55	80	103	38	85	125	66	147	142	89	131	138
													CROXTETH											
Average Value ...	161	103	72	50	37	29	17	22	44	42	150	—	162	179	189	139	148	153	163	212	190	158	239	—
Highest Value ...	601	272	108	79	71	42	77	40	122	75	471	—	323	290	223	247	184	266	375	380	523	285	468	—
Lowest Value ...	53	48	24	26	13	11	5	9	13	12	37	—	38	15	75	47	66	85	73	61	78	88	114	—
													HATTON GARDEN											
Average Value ...	37	41	11	17	20	17	18	26	57	39	53	37	289	217	137	146	173	91	149	226	211	242	432	412
Highest Value ...	93	111	63	44	49	43	43	49	115	74	275	227	585	452	290	239	226	167	343	542	452	452	866	1,108
Lowest Value ...	4	12	4	4	3	0	4	6	21	14	0	4	89	55	67	73	95	44	37	108	128	9	244	184
													WOOLTON											
Average Value ...	146	94	52	70	61	40	14	29	55	50	141	129	232	195	161	193	251	204	161	206	192	139	261	212
Highest Value ...	426	271	163	126	108	60	57	77	105	87	310	508	486	405	370	860	623	464	552	636	490	417	839	525
Lowest Value ...	67	29	15	28	26	18	8	5	12	13	28	16	110	80	83	28	114	0	20	57	85	45	83	60

Summary of Rodent Infestations and Disinfestations of Buildings and Lands During the Year 1967

Description of Premises	Infestations				Reinfestations during the Year				Category		Total infestations and reinfestations	Total remedied
	Premises	Rats	Rats and Mice	Mice	Premises	Rats	Rats and Mice	Mice	Major	Minor		
Shops	740	226	6	508	26	7	2	20	—	769	769	683
Factories	307	170	13	124	20	15	2	4	—	328	328	274
Warehouses	168	105	1	62	6	3	—	3	—	174	174	134
Dwelling-houses	2,231	902	1	1,328	5	1	—	4	—	2,236	2,236	2,236
Other buildings and lands	1,122	458	17	647	70	13	—	60	—	1,195	1,195	1,018
Food premises (included in above)...	(764)	(243)	(5)	(516)	(7)	(5)	(—)	(2)	(—)	(771)	(771)	(634)
Total	4,568	1,861	38	2,669	127	39	4	91	—	4,702	4,702	4,345

CARCASES AND OFFAL INSPECTED AND CONDEMNED IN WHOLE OR IN PART—1967

	Cattle Excluding Cows	Cows	Calves	Sheep and Lambs	Pigs
Number killed 389,508	37,193	15,066	4,301	228,409	104,539
Number inspected 389,508	37,193	15,066	4,301	228,409	104,539
All diseases except tuberculosis and cysticerci					
Whole carcases condemned	3	50	440	1,083	290
Carcases of which some part or organ was condemned	2,549	6,927	225	73,840	7,204
Percentage of the number inspected affected with diseases other than tuberculosis and cysticerci	6.8%	40.3%	15.3%	32.8%	7.1%
Tuberculosis only					
Whole carcases condemned	5	—	—	—	1
Carcases of which some part or organ was condemned	27	18	—	—	744
Percentage of the number inspected affected with tuberculosis	0.07%	0.1%	—	—	0.7%
Cysticercosis					
Carcases of which some part or organ was condemned	44	6	—	2	—
Carcases submitted to refrigeration	44	6	—	2	—
Generalised and wholly condemned	—	—	—	—	—